Exhibit 1

US011185770B2

(12) **United States Patent**
Lockton et al.

(10) **Patent No.: US 11,185,770 B2**
(45) **Date of Patent: *Nov. 30, 2021**

(54) **METHODOLOGY FOR EQUALIZING SYSTEMIC LATENCIES IN TELEVISION RECEPTION IN CONNECTION WITH GAMES OF SKILL PLAYED IN CONNECTION WITH LIVE TELEVISION PROGRAMMING**

(71) Applicant: **Winview, Inc.**, Redwood City, CA (US)

(72) Inventors: **David B. Lockton**, Redwood City, CA (US); **Mark K. Berner**, Santa Clara, CA (US); **Mark J. Micheli**, San Francisco, CA (US); **David Lowe**, Foster City, CA (US)

(73) Assignee: **Winview, Inc.**, Redwood City, CA (US)

(*) Notice: Subject to any disclaimer, the term of this patent is extended or adjusted under 35 U.S.C. 154(b) by 0 days.

This patent is subject to a terminal disclaimer.

(21) Appl. No.: **16/909,661**

(22) Filed: **Jun. 23, 2020**

(65) **Prior Publication Data**

US 2020/0330864 A1 Oct. 22, 2020

Related U.S. Application Data

(63) Continuation of application No. 15/846,004, filed on Dec. 18, 2017, now Pat. No. 10,695,672, which is a (Continued)

(51) **Int. Cl.**
A63F 13/358 (2014.01)
A63F 13/335 (2014.01)
(Continued)

(52) **U.S. Cl.**
CPC ***A63F 13/358*** (2014.09); ***A63F 13/216*** (2014.09); ***A63F 13/22*** (2014.09);
(Continued)

(58) **Field of Classification Search**
CPC A63F 13/32; A63F 13/285; A63F 13/92; A63F 13/216; A63F 13/795; A63F 13/22;
(Continued)

(56) **References Cited**

U.S. PATENT DOCUMENTS

2,831,105 A 4/1958 Parker
3,562,650 A 2/1971 Gossard et al.
(Continued)

FOREIGN PATENT DOCUMENTS

CA 2252074 11/1997
CA 2252021 11/1998
(Continued)

OTHER PUBLICATIONS

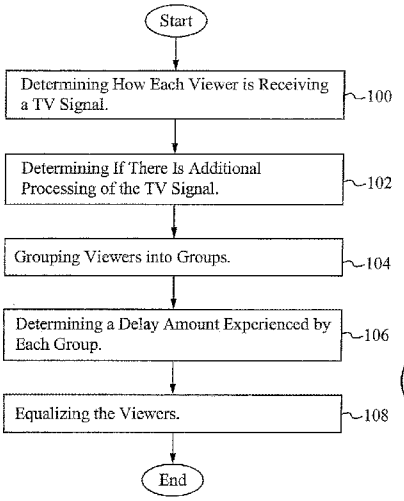
Two Way TV Patent and Filing Map www.twowaytv.com/version4/technologies/tech_patents.asp.
(Continued)

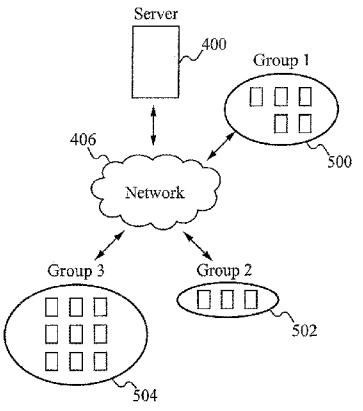
Primary Examiner — Michael A Cuff
(74) *Attorney, Agent, or Firm* — Haverstock & Owens LLP

(57) **ABSTRACT**

A method of and system for handling latency issues encountered in producing real-time entertainment such as games of skill synchronized with live or taped televised events is described herein. There are multiple situations that are dealt with regarding latencies in receiving a television signal with respect to real-time entertainment based on the unfolding games played along with the telecasts. Systemic delays, arbitrarily imposed delays of a broadcast signal and variances in the precise broadcast times of taped television programs have to be equalized so as to provide fair entertainment.

60 Claims, 5 Drawing Sheets





Related U.S. Application Data

continuation of application No. 15/496,404, filed on Apr. 25, 2017, now Pat. No. 9,878,243, which is a continuation of application No. 14/219,598, filed on Mar. 19, 2014, now Pat. No. 9,662,576, which is a continuation of application No. 13/403,845, filed on Feb. 23, 2012, now Pat. No. 8,717,701, which is a continuation of application No. 11/786,992, filed on Apr. 12, 2007, now Pat. No. 8,149,530.

(60) Provisional application No. 60/791,793, filed on Apr. 12, 2006.

(51) **Int. Cl.**

A63F 13/332	(2014.01)
A63F 13/216	(2014.01)
A63F 13/795	(2014.01)
A63F 13/338	(2014.01)
H04N 21/472	(2011.01)
H04N 21/61	(2011.01)
H04N 5/04	(2006.01)
H04N 21/436	(2011.01)
H04N 21/27	(2011.01)
H04N 21/43	(2011.01)
H04N 21/435	(2011.01)
H04N 21/478	(2011.01)
A63F 13/22	(2014.01)
A63F 13/92	(2014.01)
H04N 21/2385	(2011.01)
H04N 21/258	(2011.01)
H04N 21/442	(2011.01)
H04N 21/45	(2011.01)
A63F 13/32	(2014.01)
A63F 13/285	(2014.01)
A63F 13/50	(2014.01)
H04N 21/24	(2011.01)

(52) **U.S. Cl.**

CPC ***A63F 13/285*** (2014.09); ***A63F 13/32*** (2014.09); ***A63F 13/332*** (2014.09); ***A63F 13/335*** (2014.09); ***A63F 13/338*** (2014.09); ***A63F 13/50*** (2014.09); ***A63F 13/795*** (2014.09); ***A63F 13/92*** (2014.09); ***H04N 5/04*** (2013.01); ***H04N 21/2385*** (2013.01); ***H04N 21/24*** (2013.01); ***H04N 21/25866*** (2013.01); ***H04N 21/27*** (2013.01); ***H04N 21/4302*** (2013.01); ***H04N 21/435*** (2013.01); ***H04N 21/43615*** (2013.01); ***H04N 21/44209*** (2013.01); ***H04N 21/4508*** (2013.01); ***H04N 21/4781*** (2013.01); ***H04N 21/47217*** (2013.01); ***H04N 21/6131*** (2013.01); *A63F 2300/406* (2013.01); *A63F 2300/407* (2013.01); *A63F 2300/409* (2013.01); *A63F 2300/534* (2013.01)

(58) **Field of Classification Search**

CPC A63F 13/12; A63F 13/332; A63F 13/335; A63F 13/338; A63F 13/358; A63F 13/50; A63F 2300/406; A63F 2300/407; A63F 2300/409; H04N 21/2385; H04N 21/44209; H04N 21/47217; H04N 21/6131; H04N 21/43615; H04N 5/04; H04N 21/24; H04N 21/25866; H04N 21/27; H04N 21/4302; H04N 21/435; H04N 21/4508; H04N 21/4781

USPC 463/42, 40; 360/65

See application file for complete search history.

(56) **References Cited**

U.S. PATENT DOCUMENTS

4,141,548	A	2/1979	Everton
4,270,755	A	6/1981	Willhide et al.
4,386,377	A	5/1983	Hunter, Jr.
4,496,148	A	1/1985	Morstain et al.
4,521,803	A	6/1985	Glittinger
4,592,546	A	6/1986	Fascenda et al.
4,816,904	A	3/1989	McKenna et al.
4,918,603	A	4/1990	Hughes et al.
4,930,010	A	5/1990	MacDonald
5,013,038	A	5/1991	Luvenberg
5,018,736	A	5/1991	Pearson et al.
5,035,422	A	7/1991	Berman
5,073,931	A	12/1991	Audebert et al.
5,083,271	A	1/1992	Thatcher et al.
5,083,800	A	1/1992	Lockton
5,119,295	A	6/1992	Kapur
5,120,076	A	6/1992	Luxenberg et al.
5,213,337	A	5/1993	Sherman
5,227,874	A	7/1993	Von Kohorn
5,256,863	A	10/1993	Ferguson
5,263,723	A	11/1993	Pearson et al.
5,283,734	A	2/1994	Von Kohorn
5,327,485	A	7/1994	Leaden
5,343,236	A	8/1994	Koppe et al.
5,343,239	A	8/1994	Lappington et al.
5,417,424	A	5/1995	Snowden
5,462,275	A	10/1995	Lowe et al.
5,479,492	A	12/1995	Hofstee et al.
5,488,659	A	1/1996	Millani
5,519,433	A	5/1996	Lappington
5,530,483	A	6/1996	Cooper
5,553,120	A	9/1996	Katz
5,566,291	A	10/1996	Boulton et al.
5,585,975	A	12/1996	Bliss
5,586,257	A	12/1996	Perlman
5,589,765	A	12/1996	Ohmart et al.
5,594,938	A	1/1997	Engel
5,618,232	A	4/1997	Martin
5,628,684	A	5/1997	Jean-Etienne
5,636,920	A	6/1997	Shur et al.
5,638,113	A	6/1997	Lappington
5,643,088	A	7/1997	Vaughn et al.
5,663,757	A	9/1997	Morales
5,759,101	A	6/1998	Won Kohorn
5,761,606	A	6/1998	Wolzien
5,762,552	A	6/1998	Voung et al.
5,764,275	A	6/1998	Lappington et al.
5,794,210	A	8/1998	Goldhaber et al.
5,805,230	A	9/1998	Staron
5,813,913	A	9/1998	Berner et al.
5,818,438	A	10/1998	Howe et al.
5,828,843	A	10/1998	Grimm
5,838,774	A	11/1998	Weiser, Jr.
5,838,909	A	11/1998	Roy
5,846,132	A	12/1998	Junkin
5,848,397	A	12/1998	Marsh et al.
5,860,862	A	1/1999	Junkin
5,894,556	A	4/1999	Grimm
5,916,024	A	6/1999	Von Kohorn
5,870,683	A	9/1999	Wells et al.
5,970,143	A	10/1999	Schneier et al.
5,971,854	A	10/1999	Pearson et al.
5,987,440	A	11/1999	O'Neil et al.
6,009,458	A	12/1999	Hawkins et al.
6,015,344	A	1/2000	Kelly et al.
6,016,337	A	1/2000	Pykalisto
6,038,599	A	3/2000	Black
6,042,477	A	3/2000	Addink
6,064,449	A	5/2000	White
6,104,815	A	8/2000	Alcorn et al.
6,110,041	A	8/2000	Walker et al.
6,117,013	A	9/2000	Elba
6,126,543	A	10/2000	Friedman
6,128,660	A	10/2000	Grimm
6,135,881	A	10/2000	Abbott et al.

(56) **References Cited**

U.S. PATENT DOCUMENTS

6,154,131 A * 11/2000 Jones, II A63F 3/00157 273/138.1
6,174,237 B1 1/2001 Stephenson
6,182,084 B1 1/2001 Cockrell et al.
6,193,610 B1 2/2001 Junkin
6,222,642 B1 4/2001 Farrell et al.
6,233,736 B1 5/2001 Wolzien
6,251,017 B1 6/2001 Leason et al.
6,263,447 B1 7/2001 French
6,267,670 B1 7/2001 Walker
6,287,199 B1 9/2001 McKeown et al.
6,293,868 B1 9/2001 Bernard
6,312,336 B1 11/2001 Handelman et al.
6,343,320 B1 1/2002 Fairchild
6,345,297 B1 2/2002 Grimm
6,371,855 B1 4/2002 Gavriloff
6,373,462 B1 4/2002 Pan
6,411,969 B1 6/2002 Tam
6,416,414 B1 7/2002 Stadelmann
6,418,298 B1 7/2002 Sonnenfeld
6,425,828 B2 7/2002 Walker et al.
6,434,398 B1 8/2002 Inselberg
6,446,262 B1 9/2002 Malaure et al.
6,470,180 B1 10/2002 Kotzin et al.
6,475,090 B2 11/2002 Gregory
6,524,189 B1 2/2003 Rautila
6,527,641 B1 3/2003 Sinclair et al.
6,530,082 B1 3/2003 Del Sesto et al.
6,536,037 B1 3/2003 Guheen et al.
6,578,068 B1 6/2003 Bowma-Amuah
6,594,098 B1 7/2003 Sutardja
6,604,997 B2 7/2003 Saidakovsky et al.
6,610,953 B1 8/2003 Tao et al.
6,611,755 B1 8/2003 Coffee
6,648,760 B1 11/2003 Nicastro
6,659,860 B1 12/2003 Yamamoto et al.
6,659,861 B1 12/2003 Faris
6,659,872 B1 12/2003 Kaufman et al.
6,690,661 B1 2/2004 Agarwal et al.
6,697,869 B1 2/2004 Mallart
6,718,350 B1 4/2004 Karbowski
6,752,396 B2 6/2004 Smith
6,758,754 B1 7/2004 Lavanchy et al.
6,758,755 B2 7/2004 Kelly et al.
6,760,595 B2 7/2004 Insellberg
6,763,377 B1 7/2004 Balknap et al.
6,766,524 B1 7/2004 Matheny et al.
6,774,926 B1 8/2004 Ellis et al.
6,785,561 B1 8/2004 Kim
6,801,380 B1 10/2004 Saturdja
6,806,889 B1 10/2004 Malaure et al.
6,807,675 B1 10/2004 Millard et al.
6,811,482 B2 11/2004 Letovsky
6,811,487 B2 11/2004 Sengoku
6,816,628 B1 11/2004 Sarachik et al.
6,817,947 B2 11/2004 Tanskanen
6,824,469 B2 11/2004 Allibhoy et al.
6,837,789 B2 1/2005 Garahi et al.
6,837,791 B1 1/2005 McNutt et al.
6,840,861 B2 1/2005 Jordan et al.
6,845,389 B1 1/2005 Sen
6,846,239 B2 1/2005 Washio
6,857,122 B1 2/2005 Takeda et al.
6,863,610 B2 3/2005 Vancraeynest
6,870,720 B2 3/2005 Iwata et al.
6,871,226 B1 3/2005 Ensley et al.
6,873,610 B1 3/2005 Noever
6,884,166 B2 4/2005 Leen et al.
6,884,172 B1 4/2005 Lloyd et al.
6,887,159 B2 5/2005 Leen et al.
6,888,929 B1 5/2005 Saylor
6,893,347 B1 5/2005 Zilliacus et al.
6,898,762 B2 5/2005 Ellis et al.
6,899,628 B2 5/2005 Leen et al.
6,903,681 B2 6/2005 Faris
6,908,389 B1 6/2005 Puskala
6,942,574 B1 9/2005 LeMay et al.
6,944,228 B1 9/2005 Dakss et al.
6,960,088 B1 11/2005 Long
6,978,053 B1 12/2005 Sarachik et al.
7,001,279 B1 2/2006 Barber et al.
7,029,394 B2 4/2006 Leen et al.
7,035,626 B1 4/2006 Luciano, Jr.
7,035,653 B2 4/2006 Simon et al.
7,058,592 B1 6/2006 Heckerman et al.
7,076,434 B1 7/2006 Newman et al.
7,085,552 B2 8/2006 Buckley
7,116,310 B1 10/2006 Evans et al.
7,117,517 B1 10/2006 Milazzo et al.
7,120,924 B1 10/2006 Katcher et al.
7,124,410 B2 10/2006 Berg
7,125,336 B2 10/2006 Anttila et al.
7,136,871 B2 11/2006 Ozer et al.
7,144,011 B2 12/2006 Asher et al.
7,169,050 B1 1/2007 Tyler
7,187,658 B2 3/2007 Koyanagi
7,191,447 B1 3/2007 Ellis et al.
7,192,352 B2 3/2007 Walker et al.
7,194,758 B1 3/2007 Waki et al.
7,228,349 B2 6/2007 Barone, Jr. et al.
7,231,630 B2 6/2007 Acott et al.
7,233,922 B2 6/2007 Asher et al.
7,240,093 B1 7/2007 Danieli et al.
7,244,181 B2 7/2007 Wang et al.
7,249,367 B2 7/2007 Bove, Jr. et al.
7,254,605 B1 8/2007 Strum
7,260,782 B2 8/2007 Wallace et al.
RE39,818 E 9/2007 Slifer
7,283,830 B2 10/2007 Buckley
7,288,027 B2 10/2007 Overton
7,341,517 B2 3/2008 Asher et al.
7,343,617 B1 3/2008 Kartcher et al.
7,347,781 B2 3/2008 Schultz
7,351,149 B1 4/2008 Simon et al.
7,367,042 B1 4/2008 Dakss et al.
7,379,705 B1 5/2008 Rados et al.
7,389,144 B1 6/2008 Osorio
7,430,718 B2 9/2008 Gariepy-Viles
7,452,273 B2 11/2008 Amaitis et al.
7,460,037 B2 12/2008 Cattone et al.
7,461,067 B2 12/2008 Dewing et al.
7,502,610 B2 3/2009 Maher
7,510,474 B2 3/2009 Carter, Sr.
7,517,282 B1 4/2009 Pryor
7,534,169 B2 5/2009 Amaitis et al.
7,543,052 B1 6/2009 Cesa Klein
7,562,134 B1 7/2009 Fingerhut et al.
7,602,808 B2 10/2009 Ullmann
7,610,330 B1 10/2009 Quinn
7,614,944 B1 11/2009 Hughes et al.
7,630,986 B1 12/2009 Herz et al.
7,693,781 B2 4/2010 Asher et al.
7,699,707 B2 4/2010 Bahou
7,702,723 B2 4/2010 Dyl
7,711,628 B2 5/2010 Davie et al.
7,729,286 B2 6/2010 Mishra
7,753,772 B1 7/2010 Walker
7,753,789 B2 7/2010 Walker et al.
7,780,528 B2 8/2010 Hirayama
7,828,661 B1 11/2010 Fish
7,835,961 B2 11/2010 Davie et al.
7,860,993 B2 12/2010 Chintala
7,886,003 B2 2/2011 Newman
7,907,211 B2 3/2011 Oostveen et al.
7,907,598 B2 3/2011 Anisimov
7,925,756 B1 4/2011 Riddle
7,926,810 B2 4/2011 Fisher et al.
7,937,318 B2 5/2011 Davie et al.
7,941,482 B2 5/2011 Bates
7,941,804 B1 5/2011 Herington
7,976,389 B2 7/2011 Cannon et al.
8,002,618 B1 8/2011 Lockton et al.
8,006,314 B2 8/2011 Wold
8,025,565 B2 9/2011 Leen et al.

(56) **References Cited**

U.S. PATENT DOCUMENTS

8,028,315 B1 9/2011 Barber
8,082,150 B2 12/2011 Wold
8,086,445 B2 12/2011 Wold et al.
8,086,510 B2 12/2011 Amaitis et al.
8,092,303 B2 1/2012 Amaitis et al.
8,105,141 B2 1/2012 Leen et al.
8,107,674 B2 1/2012 Davis et al.
8,109,827 B2 2/2012 Cahill et al.
8,128,474 B2 3/2012 Amaitis et al.
8,147,313 B2 4/2012 Amaitis et al.
8,147,373 B2 4/2012 Amaitis et al.
8,149,530 B1 4/2012 Lockton et al.
8,155,637 B2 4/2012 Fujisawa
8,162,759 B2 4/2012 Yamaguchi
8,176,518 B1 5/2012 Junkin et al.
8,186,682 B2 5/2012 Amaitis et al.
8,204,808 B2 6/2012 Amaitis et al.
8,219,617 B2 7/2012 Ashida
8,240,669 B2 8/2012 Asher et al.
8,246,048 B2 8/2012 Amaitis et al.
8,267,403 B2 9/2012 Fisher et al.
8,342,924 B2 1/2013 Leen et al.
8,342,942 B2 1/2013 Amaitis et al.
8,353,763 B2 1/2013 Amaitis et al.
8,376,855 B2 2/2013 Lockton et al.
8,396,001 B2 3/2013 Jung
8,397,257 B1 3/2013 Barber
8,465,021 B2 6/2013 Asher et al.
8,473,393 B2 6/2013 Davie et al.
8,474,819 B2 7/2013 Asher et al.
8,535,138 B2 9/2013 Amaitis et al.
8,538,563 B1 9/2013 Barber
8,543,487 B2 9/2013 Asher et al.
8,555,313 B2 10/2013 Newman
8,556,691 B2 10/2013 Leen et al.
8,585,490 B2 11/2013 Amaitis et al.
8,622,798 B2 1/2014 Lockton et al.
8,632,392 B2 1/2014 Shore et al.
8,638,517 B2 1/2014 Lockton et al.
8,641,511 B2 2/2014 Ginsberg et al.
8,659,848 B2 2/2014 Lockton et al.
8,672,751 B2 3/2014 Leen et al.
8,699,168 B2 4/2014 Lockton et al.
8,705,195 B2 4/2014 Lockton
8,708,789 B2 4/2014 Asher et al.
8,717,701 B2 5/2014 Lockton et al.
8,727,352 B2 5/2014 Amaitis et al.
8,734,227 B2 5/2014 Leen et al.
8,737,004 B2 5/2014 Lockton et al.
8,738,694 B2 5/2014 Huske et al.
8,771,058 B2 7/2014 Alderucci et al.
8,780,482 B2 7/2014 Lockton et al.
8,805,732 B2 8/2014 Davie et al.
8,813,112 B1 8/2014 Cibula et al.
8,814,664 B2 8/2014 Amaitis et al.
8,817,408 B2 8/2014 Lockton et al.
8,837,072 B2 9/2014 Lockton et al.
8,849,225 B1 9/2014 Choti
8,849,255 B2 9/2014 Choti
8,858,313 B1 10/2014 Selfors
8,870,639 B2 10/2014 Lockton et al.
8,935,715 B2 1/2015 Cibula et al.
9,056,251 B2 6/2015 Lockton
9,067,143 B2 6/2015 Lockton et al.
9,069,651 B2 6/2015 Barber
9,076,303 B1 7/2015 Park
9,098,883 B2 8/2015 Asher et al.
9,111,417 B2 8/2015 Leen et al.
9,205,339 B2 12/2015 Cibula et al.
9,233,293 B2 1/2016 Lockton
9,258,601 B2 2/2016 Lockton et al.
9,270,789 B2 2/2016 Huske et al.
9,289,692 B2 3/2016 Barber
9,306,952 B2 4/2016 Burman et al.
9,314,686 B2 4/2016 Lockton
9,314,701 B2 4/2016 Lockton et al.
9,355,518 B2 5/2016 Amaitis et al.
9,406,189 B2 8/2016 Scott et al.
9,430,901 B2 8/2016 Amaitis et al.
9,457,272 B2 10/2016 Lockton et al.
9,498,724 B2 11/2016 Lockton et al.
9,501,904 B2 11/2016 Lockton
9,504,922 B2 11/2016 Lockton et al.
9,511,287 B2 12/2016 Lockton et al.
9,526,991 B2 12/2016 Lockton et al.
9,536,396 B2 1/2017 Amaitis et al.
9,556,991 B2 1/2017 Furuya
9,604,140 B2 3/2017 Lockton et al.
9,652,937 B2 5/2017 Lockton
9,662,576 B2 5/2017 Lockton et al.
9,662,577 B2 5/2017 Lockton et al.
9,672,692 B2 6/2017 Lockton
9,687,738 B2 6/2017 Lockton et al.
9,687,739 B2 6/2017 Lockton et al.
9,707,482 B2 7/2017 Lockton et al.
9,716,918 B1 7/2017 Lockton et al.
9,724,603 B2 8/2017 Lockton et al.
9,744,453 B2 8/2017 Lockton et al.
9,805,549 B2 10/2017 Asher et al.
9,821,233 B2 11/2017 Lockton et al.
9,878,243 B2 1/2018 Lockton et al.
9,881,337 B2 1/2018 Jaycob et al.
9,901,820 B2 2/2018 Lockton et al.
9,908,053 B2 3/2018 Lockton et al.
9,919,210 B2 3/2018 Lockton
9,919,211 B2 3/2018 Lockton et al.
9,919,221 B2 3/2018 Lockton et al.
9,978,217 B2 5/2018 Lockton
9,993,730 B2 6/2018 Lockton et al.
9,999,834 B2 6/2018 Lockton et al.
10,052,557 B2 8/2018 Lockton et al.
10,089,815 B2 10/2018 Asher et al.
10,096,210 B2 10/2018 Amaitis et al.
10,137,369 B2 11/2018 Lockton et al.
10,150,031 B2 12/2018 Lockton et al.
10,165,339 B2 12/2018 Huske et al.
10,186,116 B2 1/2019 Lockton
10,195,526 B2 2/2019 Lockton et al.
10,226,698 B1 3/2019 Lockton et al.
10,226,705 B2 3/2019 Lockton et al.
10,232,270 B2 3/2019 Lockton et al.
10,248,290 B2 4/2019 Galfond
10,279,253 B2 5/2019 Lockton
10,653,955 B2 5/2020 Lockton
10,695,672 B2 6/2020 Lockton et al.
10,709,987 B2 7/2020 Lockton et al.
10,721,543 B2 7/2020 Huske et al.
2001/0004609 A1 6/2001 Walker et al.
2001/0005670 A1 6/2001 Lahtinen
2001/0013067 A1 8/2001 Koyanagi
2001/0013125 A1 8/2001 Kitsukawa et al.
2001/0020298 A1 9/2001 Rector, Jr. et al.
2001/0032333 A1 10/2001 Flickinger
2001/0036272 A1 11/2001 Hirayama
2001/0036853 A1 11/2001 Thomas
2001/0044339 A1 11/2001 Cordero
2001/0054019 A1 12/2001 de Fabrega
2002/0010789 A1 1/2002 Lord
2002/0018477 A1 2/2002 Katz
2002/0026321 A1 2/2002 Faris
2002/0029381 A1 3/2002 Inselberg
2002/0035609 A1 3/2002 Lessard
2002/0037766 A1 3/2002 Muniz
2002/0069265 A1 3/2002 Bountour
2002/0042293 A1 4/2002 Ubale et al.
2002/0046099 A1 4/2002 Frengut et al.
2002/0054088 A1 5/2002 Tanskanen et al.
2002/0055385 A1 5/2002 Otsu
2002/0056089 A1 5/2002 Houston
2002/0059094 A1 5/2002 Hosea et al.
2002/0059623 A1 5/2002 Rodriguez et al.
2002/0069076 A1 6/2002 Faris
2002/0076084 A1 6/2002 Tian
2002/0078176 A1 6/2002 Nomura et al.

(56) **References Cited**

U.S. PATENT DOCUMENTS

2002/0083461 A1 6/2002 Hutcheson
2002/0091833 A1 7/2002 Grimm
2002/0095333 A1 7/2002 Jokinen et al.
2002/0097983 A1 7/2002 Wallace et al.
2002/0099709 A1 7/2002 Wallace
2002/0100063 A1 7/2002 Herigstad et al.
2002/0103696 A1 8/2002 Huang et al.
2002/0105535 A1 8/2002 Wallace et al.
2002/0107073 A1 8/2002 Binney
2002/0108112 A1 8/2002 Wallace et al.
2002/0108125 A1 8/2002 Joao
2002/0108127 A1 8/2002 Lew et al.
2002/0112249 A1 8/2002 Hendricks et al.
2002/0115488 A1 8/2002 Berry et al.
2002/0119821 A1 8/2002 Sen
2002/0120930 A1 8/2002 Yona
2002/0124247 A1 9/2002 Houghton
2002/0132614 A1 9/2002 Vanlujit et al.
2002/0133817 A1 9/2002 Markel
2002/0133827 A1 9/2002 Newman et al.
2002/0142843 A1 10/2002 Roelofs
2002/0144273 A1 10/2002 Reto
2002/0147049 A1 10/2002 Carter, Sr.
2002/0157002 A1 10/2002 Messerges et al.
2002/0157005 A1 10/2002 Bunk
2002/0159576 A1 10/2002 Adams
2002/0162031 A1 10/2002 Levin et al.
2002/0162117 A1 10/2002 Pearson
2002/0165020 A1 11/2002 Koyama
2002/0165025 A1 11/2002 Kawahara
2002/0177483 A1 11/2002 Cannon
2002/0187825 A1 12/2002 Tracy
2002/0198050 A1 12/2002 Patchen
2003/0002638 A1 1/2003 Kaars
2003/0013528 A1 1/2003 Allibhoy et al.
2003/0023547 A1 1/2003 France
2003/0040363 A1 2/2003 Sandberg
2003/0054885 A1 3/2003 Pinto et al.
2003/0060247 A1 3/2003 Goldberg et al.
2003/0066089 A1 4/2003 Anderson
2003/0069828 A1 4/2003 Blazey et al.
2003/0070174 A1 4/2003 Solomon
2003/0078924 A1 4/2003 Liechty et al.
2003/0086691 A1 5/2003 Yu
2003/0087652 A1 5/2003 Simon et al.
2003/0088648 A1 5/2003 Bellaton
2003/0114224 A1 6/2003 Anttila et al.
2003/0115152 A1 6/2003 Flaherty
2003/0125109 A1* 7/2003 Green G07F 17/3241 463/29
2003/0134678 A1 7/2003 Tanaka
2003/0144017 A1 7/2003 Inselberg
2003/0154242 A1 8/2003 Hayes et al.
2003/0165241 A1 9/2003 Fransdonk
2003/0177167 A1 9/2003 Lafage et al.
2003/0177504 A1 9/2003 Paulo et al.
2003/0189668 A1 10/2003 Newman et al.
2003/0195023 A1 10/2003 Di Cesare
2003/0195807 A1 10/2003 Maggio
2003/0208579 A1 11/2003 Brady et al.
2003/0211856 A1 11/2003 Zilliacus
2003/0212691 A1 11/2003 Kuntala et al.
2003/0216185 A1 11/2003 Varley
2003/0216857 A1 11/2003 Feldman et al.
2003/0228866 A1 12/2003 Pezeshki
2003/0233425 A1 12/2003 Lyons et al.
2004/0005919 A1 1/2004 Walker et al.
2004/0014524 A1 1/2004 Pearlman
2004/0015442 A1* 1/2004 Hmlinen G07F 17/3241 705/50
2004/0022366 A1 2/2004 Ferguson et al.
2004/0025190 A1 2/2004 McCalla
2004/0056897 A1 3/2004 Ueda
2004/0060063 A1 3/2004 Russ et al.
2004/0073915 A1 4/2004 Dureau
2004/0088729 A1 5/2004 Petrovic et al.
2004/0093302 A1 5/2004 Baker et al.
2004/0152454 A1 5/2004 Kauppinen
2004/0107138 A1 6/2004 Maggio
2004/0117831 A1 6/2004 Ellis et al.
2004/0117839 A1 6/2004 Watson et al.
2004/0125877 A1 7/2004 Chang
2004/0128319 A1 7/2004 Davis et al.
2004/0139158 A1 7/2004 Datta
2004/0139482 A1 7/2004 Hale
2004/0148638 A1 7/2004 Weisman et al.
2004/0152517 A1 8/2004 Haedisty
2004/0152519 A1 8/2004 Wang
2004/0158855 A1 8/2004 Gu et al.
2004/0162124 A1 8/2004 Barton et al.
2004/0166873 A1 8/2004 Simic
2004/0176162 A1 9/2004 Rothschild
2004/0178923 A1 9/2004 Kuang
2004/0183824 A1 9/2004 Benson
2004/0185881 A1 9/2004 Lee
2004/0190779 A1 9/2004 Sarachik et al.
2004/0198495 A1 10/2004 Cisneros et al.
2004/0201626 A1 10/2004 Lavoie
2004/0203667 A1 10/2004 Shroder
2004/0203898 A1 10/2004 Bodin et al.
2004/0210507 A1 10/2004 Asher et al.
2004/0215756 A1 10/2004 VanAntwerp
2004/0216161 A1 10/2004 Barone, Jr. et al.
2004/0216171 A1 10/2004 Barone, Jr. et al.
2004/0224750 A1 11/2004 Ai-Ziyoud
2004/0242321 A1 12/2004 Overton
2004/0266513 A1 12/2004 Odom
2005/0005303 A1 1/2005 Barone, Jr. et al.
2005/0021942 A1 1/2005 Diehl et al.
2005/0026699 A1 2/2005 Kinzer et al.
2005/0028208 A1 2/2005 Ellis
2005/0043094 A1 2/2005 Nguyen et al.
2005/0076371 A1 4/2005 Nakamura
2005/0077997 A1 4/2005 Landram
2005/0060219 A1 5/2005 Ditering et al.
2005/0097599 A1 5/2005 Potnick et al.
2005/0101309 A1 5/2005 Croome
2005/0113164 A1 5/2005 Buecheler et al.
2005/0003878 A1 6/2005 Updike
2005/0131984 A1 6/2005 Hofmann et al.
2005/0138668 A1 6/2005 Gray et al.
2005/0144102 A1 6/2005 Johnson
2005/0155083 A1 7/2005 Oh
2005/0177861 A1 8/2005 Ma et al.
2005/0210526 A1 9/2005 Levy et al.
2005/0216838 A1 9/2005 Graham
2005/0235043 A1 10/2005 Teodosiu et al.
2005/0239551 A1 10/2005 Griswold
2005/0255901 A1 11/2005 Kreutzer
2005/0256895 A1 11/2005 Dussault
2005/0266869 A1 12/2005 Jung
2005/0267969 A1 12/2005 Poikselka et al.
2005/0273804 A1 12/2005 Preisman
2005/0283800 A1 12/2005 Ellis et al.
2005/0288080 A1 12/2005 Lockton et al.
2005/0288101 A1 12/2005 Lockton et al.
2005/0288812 A1 12/2005 Cheng
2006/0020700 A1 1/2006 Qiu
2006/0025070 A1 2/2006 Kim et al.
2006/0046810 A1 3/2006 Tabata
2006/0047772 A1 3/2006 Crutcher
2006/0053390 A1 3/2006 Gariepy-Viles
2006/0058103 A1 3/2006 Danieli
2006/0059161 A1 3/2006 Millett et al.
2006/0063590 A1 3/2006 Abassi et al.
2006/0082068 A1 4/2006 Patchen
2006/0087585 A1 4/2006 Seo
2006/0089199 A1 4/2006 Jordan et al.
2006/0094409 A1 5/2006 Inselberg
2006/0111168 A1 5/2006 Nguyen
2006/0135253 A1 6/2006 George et al.
2006/0148569 A1 7/2006 Beck
2006/0156371 A1 7/2006 Maetz et al.
2006/0174307 A1 8/2006 Hwang et al.

(56) **References Cited**

U.S. PATENT DOCUMENTS

2006/0183547 A1 8/2006 McMonigle
2006/0183548 A1 8/2006 Morris et al.
2006/0190654 A1 8/2006 Joy
2006/0205483 A1 9/2006 Meyer et al.
2006/0205509 A1 9/2006 Hirota
2006/0205510 A1 9/2006 Lauper
2006/0217198 A1 9/2006 Johnson
2006/0236352 A1 10/2006 Scott, III
2006/0248553 A1 11/2006 Mikkelson et al.
2006/0248564 A1 11/2006 Zinevitch
2006/0256865 A1 11/2006 Westerman
2006/0256868 A1 11/2006 Westerman
2006/0269120 A1 11/2006 Nehmadi et al.
2006/0285586 A1 12/2006 Westerman
2007/0004516 A1 1/2007 Jordan et al.
2007/0013547 A1 1/2007 Boaz
2007/0019826 A1 1/2007 Horbach et al.
2007/0028272 A1 2/2007 Lockton
2007/0037623 A1 2/2007 Romik
2007/0054695 A1 3/2007 Huske et al.
2007/0078009 A1 4/2007 Lockton et al.
2007/0083920 A1 4/2007 Mizoguchi et al.
2007/0086465 A1 4/2007 Paila et al.
2007/0087832 A1 4/2007 Abbott
2007/0093296 A1 4/2007 Asher
2007/0101358 A1 5/2007 Ambady
2007/0106721 A1 5/2007 Schloter
2007/0107010 A1 5/2007 Jolna et al.
2007/0129144 A1 6/2007 Katz
2007/0147870 A1 7/2007 Nagashima et al.
2007/0162328 A1 7/2007 Reich
2007/0183744 A1 8/2007 Koizumi
2007/0197247 A1 8/2007 Inselberg
2007/0210908 A1 9/2007 Putterman et al.
2007/0219856 A1 9/2007 Ahmad-Taylor
2007/0222652 A1 9/2007 Cattone et al.
2007/0226062 A1 9/2007 Hughes et al.
2007/0238525 A1 10/2007 Suomela
2007/0243936 A1 10/2007 Binenstock et al.
2007/0244570 A1 10/2007 Speiser et al.
2007/0244585 A1 10/2007 Speiser et al.
2007/0244749 A1 10/2007 Speiser et al.
2007/0265089 A1 11/2007 Robarts
2007/0294410 A1 12/2007 Pandya
2008/0005037 A1 1/2008 Hammad
2008/0013927 A1 1/2008 Kelly et al.
2008/0051201 A1 2/2008 Lore
2008/0066129 A1 3/2008 Katcher et al.
2008/0076497 A1 3/2008 Kiskis et al.
2008/0104630 A1 5/2008 Bruce
2008/0146337 A1 6/2008 Halonen
2008/0169605 A1 7/2008 Shuster et al.
2008/0222672 A1 9/2008 Piesing
2008/0240681 A1 10/2008 Fukushima
2008/0248865 A1 10/2008 Tedesco
2008/0270288 A1 10/2008 Butterly et al.
2008/0288600 A1 11/2008 Clark
2009/0011781 A1 1/2009 Merrill et al.
2009/0094632 A1 4/2009 Newman et al.
2009/0103892 A1 4/2009 Hirayama
2009/0186676 A1 7/2009 Amaitis et al.
2009/0163271 A1 9/2009 George et al.
2009/0228351 A1 9/2009 Rijsenbrij
2009/0234674 A1 9/2009 Wurster
2009/0264188 A1 10/2009 Soukup
2009/0271512 A1 10/2009 Jorgensen
2009/0325716 A1* 12/2009 Harari G07F 17/3288 463/42
2010/0099421 A1 4/2010 Patel et al.
2010/0099471 A1 4/2010 Feeney et al.
2010/0107194 A1 4/2010 McKissick et al.
2010/0120503 A1 5/2010 Hoffman et al.
2010/0137057 A1 6/2010 Fleming
2010/0203936 A1 8/2010 Levy
2010/0279764 A1 11/2010 Allen et al.
2010/0296511 A1 11/2010 Prodan
2011/0016224 A1 1/2011 Riley
2011/0053681 A1 3/2011 Goldman
2011/0065490 A1 3/2011 Lutnick
2011/0081958 A1 4/2011 Herman
2011/0116461 A1 5/2011 Holt
2011/0130197 A1 6/2011 Bythar et al.
2011/0227287 A1 9/2011 Reabe
2011/0269548 A1 11/2011 Barclay et al.
2011/0306428 A1 12/2011 Lockton et al.
2012/0058808 A1 3/2012 Lockton
2012/0115585 A1 5/2012 Goldman
2012/0157178 A1 6/2012 Lockton
2012/0264496 A1 10/2012 Behrman et al.
2012/0282995 A1 11/2012 Allen et al.
2012/0295686 A1 11/2012 Lockton
2013/0005453 A1 1/2013 Nguyen et al.
2013/0072271 A1 3/2013 Lockton et al.
2013/0079081 A1 3/2013 Lockton et al.
2013/0079092 A1 3/2013 Lockton et al.
2013/0079093 A1 3/2013 Lockton et al.
2013/0079135 A1 3/2013 Lockton et al.
2013/0079150 A1 3/2013 Lockton et al.
2013/0079151 A1 3/2013 Lockton et al.
2013/0196774 A1 8/2013 Lockton et al.
2013/0225285 A1 8/2013 Lockton
2013/0225299 A1 8/2013 Lockton
2014/0031134 A1 1/2014 Lockton et al.
2014/0100011 A1 4/2014 Gingher
2014/0106832 A1 4/2014 Lockton et al.
2014/0128139 A1 5/2014 Shuster et al.
2014/0155130 A1 6/2014 Lockton et al.
2014/0155134 A1 6/2014 Lockton
2014/0206446 A1 7/2014 Lockton et al.
2014/0237025 A1 8/2014 Huske et al.
2014/0248952 A1 9/2014 Cibula et al.
2014/0256432 A1 9/2014 Lockton et al.
2014/0279439 A1 9/2014 Brown
2014/0287832 A1 9/2014 Lockton et al.
2014/0335961 A1 11/2014 Lockton et al.
2014/0335962 A1 11/2014 Lockton et al.
2014/0378212 A1 12/2014 Sims
2015/0011310 A1 1/2015 Lockton et al.
2015/0067732 A1 3/2015 Howe et al.
2015/0148130 A1 5/2015 Cibula et al.
2015/0238839 A1 8/2015 Lockton
2015/0238873 A1 8/2015 Arnone et al.
2015/0258452 A1 9/2015 Lockton et al.
2015/0356831 A1 12/2015 Osibodu
2016/0023116 A1 1/2016 Wire
2016/0045824 A1 2/2016 Lockton et al.
2016/0049049 A1 2/2016 Lockton
2016/0054872 A1 2/2016 Cibula et al.
2016/0082357 A1 3/2016 Lockton
2016/0121208 A1 5/2016 Lockton et al.
2016/0134947 A1 5/2016 Huske et al.
2016/0217653 A1 7/2016 Meyer
2016/0271501 A1 9/2016 Balsbaugh
2016/0361647 A1 12/2016 Lockton et al.
2016/0375362 A1 12/2016 Lockton et al.
2017/0036110 A1 2/2017 Lockton et al.
2017/0036117 A1 2/2017 Lockton et al.
2017/0043259 A1 2/2017 Lockton et al.
2017/0053498 A1 2/2017 Lockton
2017/0065891 A1 3/2017 Lockton et al.
2017/0098348 A1 4/2017 Odom
2017/0103615 A1 4/2017 Theodospoulos
2017/0128840 A1 5/2017 Croci
2017/0221314 A1 8/2017 Lockton
2017/0225071 A1 8/2017 Lockton et al.
2017/0225072 A1 8/2017 Lockton et al.
2017/0232340 A1 8/2017 Lockton
2017/0243438 A1 8/2017 Merati
2017/0249801 A1 8/2017 Malek
2017/0252649 A1 9/2017 Lockton et al.
2017/0259173 A1 9/2017 Lockton et al.
2017/0264961 A1 9/2017 Lockton
2017/0282067 A1 10/2017 Lockton et al.
2017/0296916 A1 10/2017 Lockton et al.

(56) **References Cited**

U.S. PATENT DOCUMENTS

2017/0304726	A1	10/2017	Lockton et al.
2017/0345260	A1	11/2017	Strause
2018/0025586	A1	1/2018	Lockton
2018/0071637	A1	3/2018	Baazov
2018/0104582	A1	4/2018	Lockton et al.
2018/0104596	A1	4/2018	Lockton et al.
2018/0117464	A1	5/2018	Lockton et al.
2018/0140955	A1	5/2018	Lockton et al.
2018/0154255	A1	6/2018	Lockton
2018/0169523	A1	6/2018	Lockton et al.
2018/0190077	A1	7/2018	Hall
2018/0236359	A1	8/2018	Lockton et al.
2018/0243652	A1	8/2018	Lockton et al.
2018/0264360	A1	9/2018	Lockton et al.
2018/0300988	A1	10/2018	Lockton
2018/0318710	A1	11/2018	Lockton et al.
2019/0054375	A1	2/2019	Lockton et al.
2019/0060750	A1	2/2019	Lockton et al.

FOREIGN PATENT DOCUMENTS

CA	2279069		7/1999
CA	2287617		10/1999
EP	0649102	A3	6/1996
GB	2364485		1/2002
JP	11-46356		2/1999
JP	11-239183		8/1999
JP	2000-165840		6/2000
JP	2000-217094		8/2000
JP	2000-358255		12/2000
JP	2001-28743		1/2001
JP	2000-209563		7/2008
NZ	330242		10/1989
WO	01/039506	A2	5/2001
WO	01/65743	A1	9/2001
WO	02/03698	A1	10/2002
WO	2005064506	A1	7/2005
WO	2006004855		1/2006
WO	2006004856		1/2006
WO	2007002284		1/2007
WO	2007016575		2/2007
WO	2007041667		4/2007
WO	2008027811	A2	3/2008
WO	2008115858	A1	9/2008

OTHER PUBLICATIONS

'Ark 4.0 Standard Edition, Technical Overview' www.twowaytv.com/version4/technologies/tech_ark_professionals.asp.

"Understanding the Interactivity Between Television and Mobile commerce", Robert Davis and David Yung, Communications of the ACM, Jul. 2005, vol. 48, No. 7, pp. 103-105.

"Re: Multicast Based Voting System" www.ripe.net/ripe/maillists/archives/mbone-eu-op/1997/msg00100html.

"IST and Sportal.com: Live on the Internet Sep. 14, 2004 by Clare Spoonheim", www.isk.co.usk/NEWS/dotcom/ist_sportal.html.

"Modeling User Behavior in Networked Games byTristan Henderson and Saleem Bhatti", www.woodworm.cs.uml.edu/rprice/ep/henderson.

"SMS Based Voting and Survey System for Meetings", www.abbit.be/technology/SMSSURVEY.html.

"PurpleAce Launches 3GSM Ringtone Competition", www.wirelessdevnet.com/news/2005/jan/31/news6html.

"On the Perfomance of Protocols for collecting Responses over a Multiple-Access Channel", Mostafa H. Ammar and George N. Rouskas, IEEE INCOMFORM '91, pp. 1490-1499, vol. 3, IEEE, New York, NY.

Merriam-Webster, "Game" definition, <http://www.merriam-webster.com/dictionary/agme.pg.1.

Ducheneaut et al., "The Social Side of Gaming: A Study of Interaction Patterns in a Massively Multiplayer Online Game", Palo Alto Research Center, Nov. 2004, vol. 6, Issue 4, pp. 360-369.

http://help.yahoo.com/help/us/tourn/tourn-03.html.

Pinnacle, "The basics of reverse line movement," Jan. 19, 2018, Retrieved on Jan. 22, 2020 , http://www.pinnacle.com/en/betting-articles educational/basics-of-reverse-line-movement/QAH26XGGQQS7M3GD.

Gambling Commission,"Virtual currencies, eSports and social casino gaming-position paper," Mar. 2017, Retrieved on Jan. 22, 2020, http://gamblingcomission.gov.uk/PDF/Virtual-currencies-eSports-and -social-casino-gaming.pdf.

Sipko et al.,"Machine learning for the prediction of professional tennis matches," In: MEng computing-final year project, Imperial College London, Jun. 15, 2015, http://www.doc.ic.ac.uk/teaching/distinguished-projects/2015/m.sipko.pdf.

Winview Game Producer, "Live TV Sports Play Along App WinView Games Announces Sponsorship With PepsiCo To Start This Holiday Season," In Winview Games. Dec. 21, 2016, Retrieved on Jan. 21, 2020 from , http://www. winviewgames./press-release/live-tv-sports-play-along-app-winview-games-announces-sponsorship-pepsico-start-holiday-season/.

The International Search Report and the Written Opinion for the PCT/US2019/054859 dated Feb. 4, 2020.

The International Preliminary Report dated Apr. 22, 2021 for the application PCT/US2019/054859.

* cited by examiner

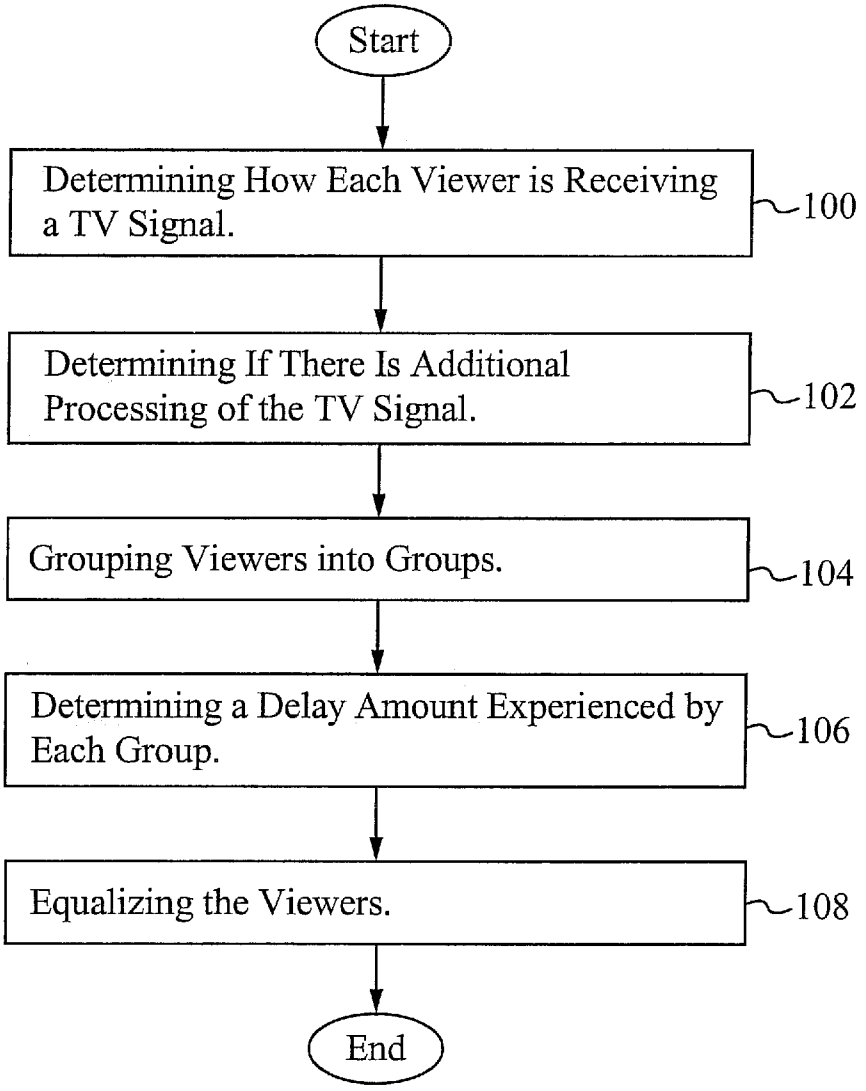

Start
Determining How Each Viewer is Receiving a TV Signal.
100
Determining If There Is Additional Processing of the TV Signal.
102
Grouping Viewers into Groups.
104
Determining a Delay Amount Experienced by Each Group.
106
Equalizing the Viewers.
108
End

Fig. 1

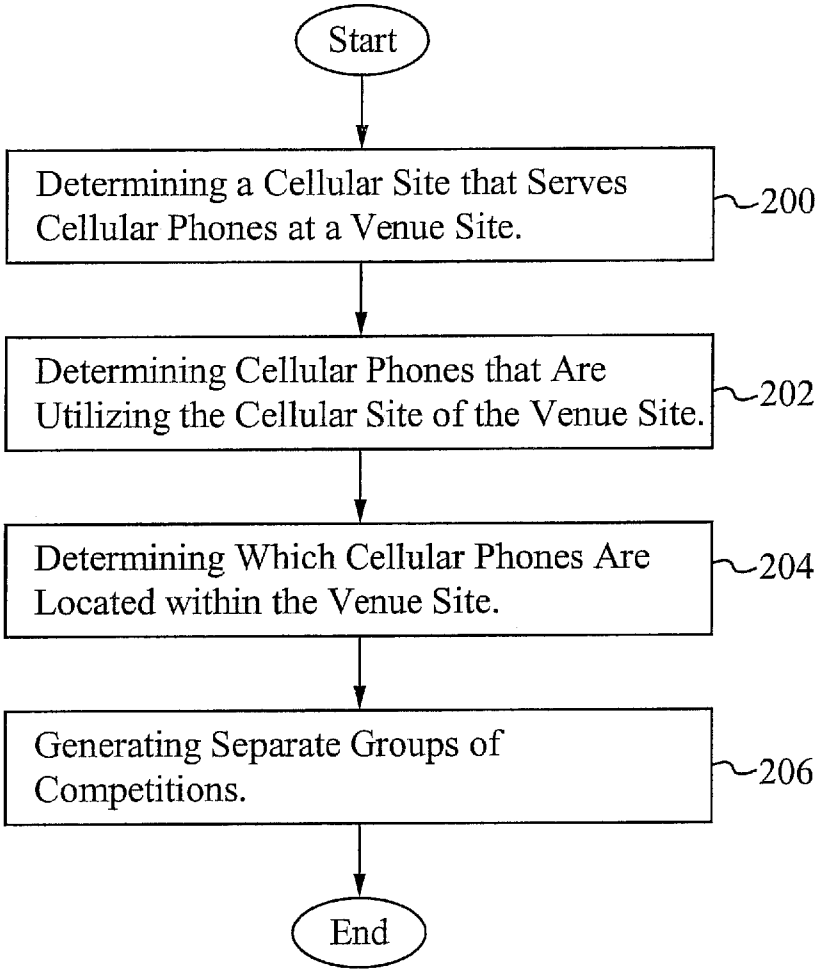

Start
Determining a Cellular Site that Serves Cellular Phones at a Venue Site.
200
Determining Cellular Phones that Are Utilizing the Cellular Site of the Venue Site.
202
Determining Which Cellular Phones Are Located within the Venue Site.
204
Generating Separate Groups of Competitions.
206
End

Fig. 2

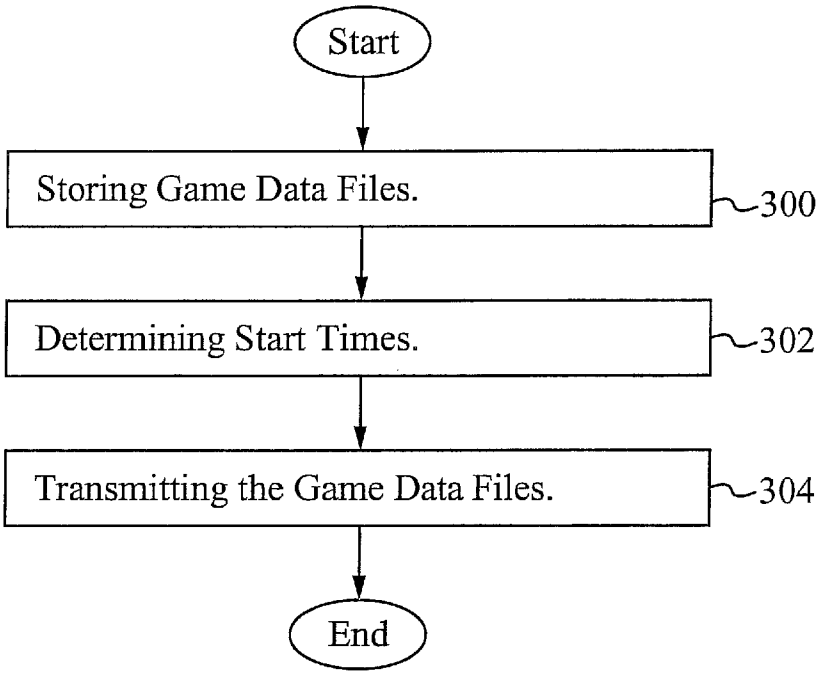

Start
Storing Game Data Files.
300
Determining Start Times.
302
Transmitting the Game Data Files.
304
End

Fig. 3

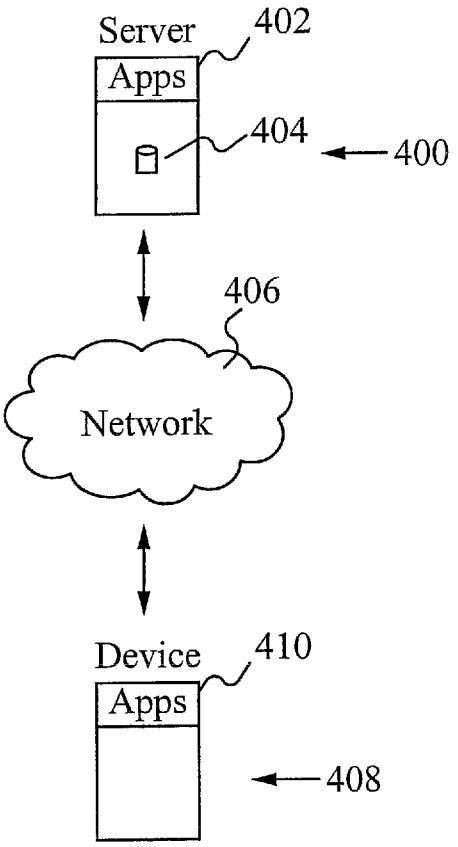


Fig. 4

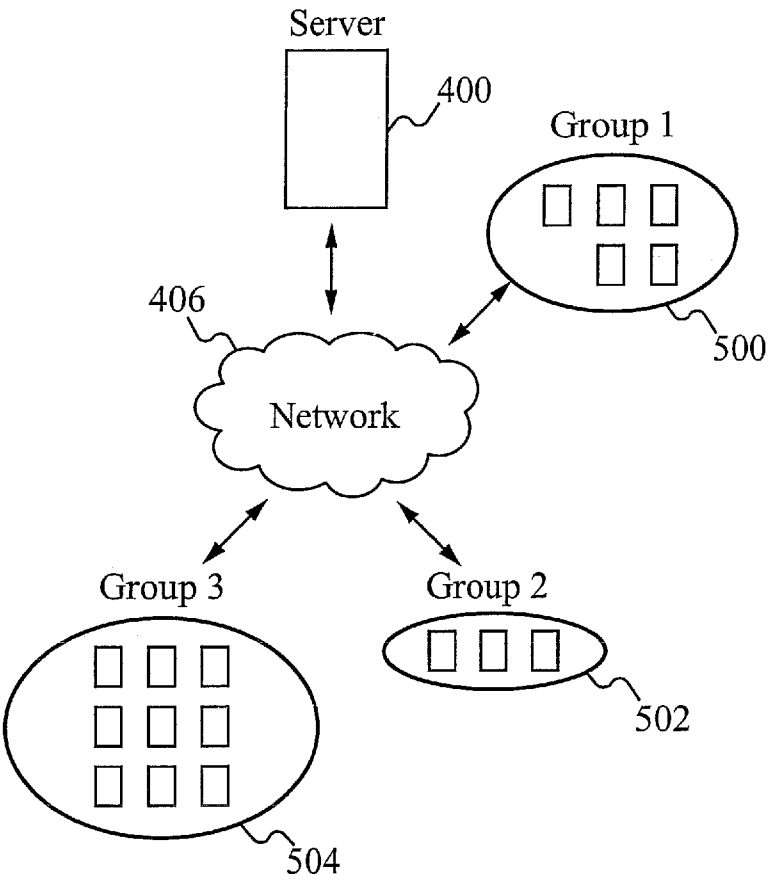


Fig. 5

METHODOLOGY FOR EQUALIZING SYSTEMIC LATENCIES IN TELEVISION RECEPTION IN CONNECTION WITH GAMES OF SKILL PLAYED IN CONNECTION WITH LIVE TELEVISION PROGRAMMING

RELATED APPLICATION(S)

This Patent Application is a continuation of U.S. patent application Ser. No. 15/846,004, filed Dec. 18, 2017 and titled "A METHODOLOGY FOR EQUALIZING SYSTEMIC LATENCIES IN TELEVISION RECEPTION IN CONNECTION WITH GAMES OF SKILL PLAYED IN CONNECTION WITH LIVE TELEVISION PROGRAMMING," which is a continuation of U.S. patent application Ser. No. 15/496,404, filed Apr. 25, 2017 and titled "A METHODOLOGY FOR EQUALIZING SYSTEMIC LATENCIES IN TELEVISION RECEPTION IN CONNECTION WITH GAMES OF SKILL PLAYED IN CONNECTION WITH LIVE TELEVISION PROGRAMMING," which is a continuation of U.S. patent application Ser. No. 14/219,598, filed Mar. 19, 2014 and titled "A METHODOLOGY FOR EQUALIZING SYSTEMIC LATENCIES IN TELEVISION RECEPTION IN CONNECTION WITH GAMES OF SKILL PLAYED IN CONNECTION WITH LIVE TELEVISION PROGRAMMING," which is a continuation of U.S. patent application Ser. No. 13/403,845, filed Feb. 23, 2012 and titled "A METHODOLOGY FOR EQUALIZING SYSTEMIC LATENCIES IN TELEVISION RECEPTION IN CONNECTION WITH GAMES OF SKILL PLAYED IN CONNECTION WITH LIVE TELEVISION PROGRAMMING," which is a continuation of U.S. patent application Ser. No. 11/786,992, filed Apr. 12, 2007, titled, "A METHODOLOGY FOR EQUALIZING SYSTEMIC LATENCIES IN TELEVISION RECEPTION IN CONNECTION WITH GAMES OF SKILL PLAYED IN CONNECTION WITH LIVE TELEVISION PROGRAMMING," now issued as U.S. Pat. No. 8,149,530, which claims priority under 35 U.S.C. § 119(e) of the co-owned U.S. Provisional Patent Application No. 60/791,793, filed Apr. 12, 2006, and titled "A METHODOLOGY FOR EQUALIZING SYSTEMIC LATENCIES IN TELEVISION RECEPTION IN CONNECTION WITH GAMES OF SKILL PLAYED IN CONNECTION WITH LIVE TELEVISION PROGRAMMING" which are also all hereby incorporated by reference in their entireties.

FIELD OF THE INVENTION

The present invention relates to the field of distributed gaming. More specifically, the present invention relates to the field of distributed gaming utilizing a mobile device.

BACKGROUND OF THE INVENTION

In the United States alone there are over 170 million registered cellular phones. With the expiration of the U.S. Pat. No. 4,592,546 to Fascenda and Lockton, companies are able to now use the cellular phone and other mobile communication devices utilizing a multicast network to control television viewers in games of skill based upon predicting, for example, what the quarterback may call on the next play within a football game. Both prime time and programs syndicated on a market-by-market basis lend themselves to games of skill. In addition, games of skill with a common

start time can be conducted simultaneously among cellular phone owners, based on classic card, dice, trivia, and other games. In order to avoid the anti-gaming laws in the various states, the winners must be determined by the relative skill, experience and practice of the player in each discrete game.

U.S. Pat. No. 5,813,913 ('913) to Berner and Lockton provides for a central computing system which includes a means of grouping participants having similar skill levels together in simultaneous, but separate, levels of competition playing an identical game. The relative performances are communicated to only those participants competing at the same skill level. The '913 patent also provides for a wireless receiving device to permanently store the specific skill level for each participant for each type of common event such as those based on televised sports or game shows. The '913 patent provides for a telephonic link at the completion of the game to collect information and update the skill level of the participants of a particular game. When a person achieves sufficient points or meets other objective criteria to graduate into another skill level, a method is provided for accomplishing this in the central computer and then transmitting an alert to the participant notifying them of their promotion. The '913 patent describes awarding prizes and providing recognition for the members of each discreet skill level in a common game. All users, no matter what level they are on, receive the same number of questions and thus the possibility of earning the same number of points. Thus direct comparisons between users at different levels, although not encouraged are possible. Such comparisons between players of disparate skills can lead to user discouragement.

Games of skill and chance have an intrinsic excitement and entertainment value. Any game is greatly enhanced by a participant's ability to know how their performance compares in relation to other participants and/or to historical performance for the game throughout the contest. As with any game of skill, competition among friends, or with strangers of similar experience, or the ability at ones option, sometimes for an extra consideration, to compete in a separate team or individual contest, offers the opportunity of increased enjoyment and prizes.

Games of skill that rely on participation by watching an event on a television have potential latency issues since television signal reception is not synchronized nationwide. For example, a participant in Texas using a satellite dish network may experience a 3 second delay compared to an individual in California using a cable network. Also, there are delays between individuals attending a game live and those watching the game live on television. Furthermore, for taped programs, both those shown to viewers in time zones or those syndicated on a market-by-market basis, there are potential delay issues as experienced with the live broadcasts in addition to other possible differences in timing of the broadcasts. Therefore, to maintain user enjoyment and fairness for all participants, these delays must be neutralized.

SUMMARY OF THE INVENTION

A method of and system for handling latency issues encountered in producing real-time entertainment such as games of skill synchronized with live or taped televised events is described herein. There are multiple situations that are dealt with regarding latencies in receiving a television signal with respect to real-time entertainment based on the unfolding games played along with the telecasts. Systemic delays, arbitrarily imposed delays of a broadcast signal and

variances in the precise broadcast times of taped television programs have to be equalized so as to provide fair entertainment.

In one aspect, a method of equalizing effects of latency differences in a game of skill comprises grouping participants into a set of cohorts viewing a telecast delivered by identical transmission and reception systems, determining an amount of delay for each cohort in the set of cohorts and substantially equalizing the set of cohorts through adjustment of the amount of delay. The method further comprises determining how each participant receives a television signal. How each participant receives a television signal is selected from the group consisting of an over the air broadcast, a cable system and a satellite system. The participants are grouped based on how the participants receive a television signal. The method further comprises determining if there is additional processing of a television signal in a reception location. The additional processing occurs within a participant's location selected from the group consisting of a public place, a home, an office and a bar. Since each cable system may impose different delay at their head-ends, the specific cable provider is identified. Determining the amount of delay comprises one or more of requiring the participants to answer questions related to their television system service, requiring the participants to mark on a game playing client device, a precise time that a predetermined audio or visual event is viewed on a television program, utilizing a GPS function in a cellular phone to determine a physical location of each of the participants, utilizing an employee of a game producer who is a member of each cohort in the set of cohorts to determine the amount of delay, inserting an artifact in the telecast in which the participants respond to, and establishing the amount of delay through an automated system which samples an audio or video track of a satellite, cable or over the air broadcast television signal, linked to a game server, to provide information related to a precise arrival of an underlying television picture. An average is taken when requiring participants to mark the precise time the predetermined audio or visual event is viewed on the television program. Equalizing the set of cohorts comprises at least one of time stamping the amount of delay on a game lock out signal, imposing the amount of delay on an entire game data stream and sending game control data to the participant cohorts at the same time where client software delays presentation of game data based on a precise time of reception of the telecast by the group.

In another aspect, a method of preventing a first set of participants at a live event from having an advantage over a second set of participants watching the live event on television comprises determining a cellular site that serves a set of cellular phones at a venue site, determining the set of cellular phones that are utilizing the cellular site of the venue site, determining a subset of cellular phones within the set of cellular phones that are located within the venue site and generating separate groups of competitions based on the subset of cellular phones within the set of cellular phones that are located within the venue site. A first group within the separate groups of competitions includes only the first set of participants and a second group within the separate groups of competitions includes only the second set of participants. An application on a server determines the cellular site, the set of cellular phones utilizing the cellular site and the subset of cellular phones located within the venue site. An application on each cellular phone within the subset of cellular phones determines if the cellular phone is located within the venue site.

In another aspect, a method of equalizing effects of latency issues with a taped television broadcast comprises storing a set of data files on a server, determining one or more start times and transmitting the set of files from the server to each mobile device at a transmission time corresponding to an appropriate start time for the mobile device. An application starts using the set of files at the one or more start times. The set of data files are game data files. Determining the one or more start times includes at least one of utilizing an employee of a game provider based on visual observation of a telecast, utilizing at least one of an audio and video recognition system with online access to the broadcast for each separate market which provides real-time tracking of the broadcast to the server, adding at least one of an audio and video event in the television broadcast which is recognizable at a starting point, designating at least one of the audio and video event in the television broadcast which is recognizable as the starting point, utilizing an audio signal, inserted within the broadcast recognizable by an audio receiver of the mobile device, and using a vertical blanking interval.

In yet another aspect, a system for equalizing effects of latency issues for a game of skill comprises a mobile device and a server coupled to the mobile device wherein the server sends a lockout signal at an appropriate time based on a measured amount of delay to prevent a user from submitting a response after they see the outcome. The mobile device is within a group of mobile devices. The server determines which group the mobile device is in. The server stores game control data and transmits the game control data to the mobile device. The game control data includes delay information for implementing the lockout signal. The server contains a location determination application for determining the location of the mobile device. The mobile device contains a location determination application for determining the location of the mobile device. Variances in delays in receiving the television signal determine delays in transmitting applicable data files within a television signal reception path

In another aspect, a device for equalizing effects of latency issues for a game of skill comprises a storage device and a set of applications contained within the storage device for sending a lockout signal at an appropriate time based on a measured amount of delay to prevent a user from submitting a response after they see the outcome. The set of applications determines which group mobile devices coupled to the device are in. The device stores game control data and transfers the game control data to mobile devices. The game control data includes delay information for implementing the lockout signal. The set of applications includes a location application for determining the location of mobile devices. The amount of delay accounts for delays within a television signal reception path.

A network of devices comprises a plurality of mobile devices and a server coupled to the mobile devices wherein the server groups the plurality of mobile devices into a set of cohorts and wherein the server sends a lockout signal at an appropriate time based on an amount of delay to prevent users from submitting a response after they see the outcome. Each cohort within the set of cohorts is based on a signal reception path. The signal reception path is selected from the group consisting of an over the air network, a cable network and a satellite network. The server stores game control data and transfers the game control data to each mobile device within the plurality of mobile devices. The game control data is specific for each cohort within the set of cohorts. The game control data includes delay information for equalizing

the lockout signal. The amount of delay accounts for delays within a television signal reception path.

BRIEF DESCRIPTION OF THE DRAWINGS

FIG. **1** illustrates a flowchart of a process of preventing latency issues from giving an advantage to some participants.

FIG. **2** illustrates a flowchart of a process of preventing participants at a live event from having an unfair advantage over participants watching on television.

FIG. **3** illustrates a flowchart of a process of handling latency issues for taped programs.

FIG. **4** illustrates a graphical representation of an embodiment of the present invention.

FIG. **5** illustrates a graphical representation of a network of devices of the present invention.

DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENT

U.S. Provisional Patent Application No. 60/692,356, filed Jun. 20, 2005, and entitled "SYSTEMS AND METHODOLOGIES ENABLING A CELL PHONE BASED SUBSCRIPTION SERVICE OFFERING A VARIETY OF SCHEDULED GAMES IN CONNECTION WITH LIVE TELEVISION PROGRAMMING," is incorporated by reference herein.

The present invention addresses three separate classes of latency issues for the length of time it takes a television signal to reach a viewer in producing real-time entertainment such as games of skill synchronized with television programming. The latency issues are: 1) systemic propagation delays in the delivery of a television signal to a receiver, 2) arbitrarily imposed delays of a broadcast television signal and 3) variances in precise broadcast times of segments of taped television programs between local and national commercials, sold through syndication to individual television stations.

Systemic Propagation Delays

There are specific challenges facing a service comprised of games or other entertainment played by remote participants utilizing cellular phones or the Internet, in connection with a live or taped telecast. Examples are live baseball, basketball and football games, taped game shows such as Wheel of Fortune™ and Jeopardy™ or other television programming such as predicting the winners of the Oscars. In a game of skill, for example, fair competition necessitates that a fast paced game, based on the unfolding television action has a level playing field for all participants regardless of how they receive their television signal. Propagation delays result from, among other things, the number of satellite hops required to deliver the signal, the method of processing and rebroadcasting the signal after it is received by cable systems head ends or an over the air broadcast television station, and whether or not the signal is further processed for high definition television. Furtheimore, digital television recording systems (DVRs) such as TiVo™ are also able to generate delays in the viewing of the picture after receipt via satellite or cable. These delays are able to result in a difference between the first signal received and the last received of more than several seconds.

People have an unsatisfactory experience and/or others are able to gain a potential competitive advantage from the variances in the exact time one viewer sees an event on their television versus another competitor who receives their television signal through a different delivery path. In the U.S., the 120 million television homes receive their signal either through an over the air broadcast, cable system or via satellite delivery. Each delivery system can impose propagation delays of various time lengths. If the delay between the time a viewer with the least amount of delay and the person receiving the signal with the greatest amount of delay exceeds several seconds, some inequalities in game experience and play are able to result.

One example is a game is based upon a football telecast, wherein competitors predict the play that the coaches and/or quarterback call prior to the snap of the ball. The competitor's prediction is based among other things on their observation of the down, distance and the offensive and defensive formations on the field and tendencies of the teams in these situations. Such a game utilizes a "lock out" signal, as described in the U.S. Pat. No. 4,592,546 to Fascenda, entitled "Game of Skill Playable by Remote Participants in Conjunction with a Live Event," which is incorporated by reference herein, to prohibit the entry of predictions after the competitor sees the play begin to unfold, at the snap of the ball. The time stamped "lock out" signal is generated by a game producer also viewing the same telecast from a different location. If the game producer is viewing a television signal several seconds before some competitors and generating a time stamp based on that event, an advantage is able to result if the difference in the time stamp and the receipt of the "lock out" signal is more than several seconds earlier in relation to another competitor's television signal which is delayed. During this period of time, for example, on a first or second down situation, a competitor receives the "lock out" just as the quarterback receives the snap and the corresponding television signal at the same time as the game producer while another competitor with a delayed television signal, receives a "lock out" signal while the quarterback is approaching the line of scrimmage. In another example, if the game producer is viewing a signal after a viewer, a competitor might see the quarterback start to drop back into a "shot gun" formation, making the likelihood of a pass considerably higher. This latter player might have time to change his prediction from, "run" to "pass" before receiving a "lock out" generated at the snap of the ball. A person consistently receiving a "lock out" later than another competitor might, through the course of the game, gain some competitive advantage.

While it is not clear that sufficient enough competitive advantage is gained between a competitor receiving his "lock out" signal precisely at the snap of the ball and one who is locked out a few seconds prior to the snap of the ball, this discrepancy could present the appearance of a playing field that is not level, and one of the primary benefits of the system addressed in the present invention is to ensure the competitors feel they are on equal footing.

The present invention solves the above described issue through a system and method to effectively equalize systemic propagation delay variances to a required level dictated by the demands and rules of a particular game, so that a material competitive advantage is not obtained and the user experience is optimized for all players.

The solution first relies on the determination of how each viewer is receiving their television signal (e.g. via an over the air broadcast in a metropolitan area, via a particular cable system or a particular satellite system). All subscribers to a particular service provider or who are receiving an over the air broadcast in a specific metropolitan area will receive the signal at their location at the same time. It is also able to be

determined if there is further processing of the signal within the homes, office, bar and others, which could further increase the total length of the propagation delay. Examples would be the use of a DVR, such as TiVo™. The present invention relies on a variety of methodologies which are able to be utilized to determine the time difference between the reception of the television picture being utilized by the central game production facility where "lock out" signals are generated and each separate group of viewers around the country or around the world.

For this system, the total viewing population for a telecast is divided into segments or blocks of viewers referred to as "cohorts." For example, the 2 million inhabitants of the San Francisco Bay Area would be divided into approximately 1 over the air broadcast, 3 satellite independent providers and several cable "head ends" or central broadcast points serving a "cohort." This information would be gathered at a central game server, and all players registered to play in a particular contest would be assigned to a specific cohort of viewers.

The following are some methodologies for determining the delays experienced by various cohorts which are able to be used in combination or separately.

In one methodology, upon joining the service and prior to initial game play, subscribers and competitors are required to identify the method by which they receive their television signal and identify the cable or satellite service provider and answer questions relative to whether or not they subscribe to an analog or digital high definition service or utilize a DVR. This information is able to be verified by sending questions to their cellular phones concerning commercials, station breaks and the precise time they are viewed or utilizing other information only seen by members of that cohort.

In another methodology, a routine is established upon entry into the game where the individual viewer is asked to mark the precise time a predetermined audio or visual event in the television program occurs, such as the initial kickoff, which would establish the deviation of their receipt of their television picture from the television signal utilized by the game producers. While some viewers might attempt to cheat by delaying their input, the earliest entries from the cohorts in this group would be averaged to establish the accurate delta between the receipt of the telecast by the production crew and those in each discrete sub group of viewers.

In another methodology, the GPS function in the cellular phone is used to determine the physical location of a viewer which is matched to a database of cable lead ends or over the air broadcast stations available to a consumer in that precise location.

In another methodology, employees of the game producer who are members of the subgroups which constitute the competitors/viewers, e.g. a subscriber to Comcast Cable in San Francisco, are utilized by the game service provider. These individuals would provide the current propagation delay information sent to the game server utilizing their identification of a recognizable event they observe on their television set, such as the initial snap of the ball.

In another methodology, audio or video artifacts or information done in cooperation with the television signal provider are inserted which must be immediately responded to by the competitor to verify the source of their television signal or monitored at cooperative viewers' television sets.

In another methodology, the various delays through an automated system linked to the game server, which continuously samples the audio or video track of the underlying satellite, cable or over the air broadcast television signals are established around the country to provide the information of the precise arrival of the underlying television picture.

Utilizing software resident in the game control server, game control data for each set of viewers/competitors of the game in progress who are receiving their television picture through the same source are batched together by the game control server, and the appropriate delay is either time stamped on the game "lock out" signals, or is imposed on the entire data stream so that competitors receiving their television information slightly behind or ahead of others gain no material competitive advantage. Another method is for the game control server to send all the game control data to all of the viewers/competitors of the game at the same time, and the client software is able to delay the presentation of the game data based on the viewers' cohort.

Utilizing these methodologies to measure the delays in each cohort, each cohort of viewers would have artificial time delays on the game control information imposed by the game control server, which would substantially equalize the receipt of "lock out" data relative to the event triggering the "lock out," based on the underlying television programming, for example, the snap of the football. Players receiving the television signals in advance of the one with the slowest receipt of the television signal would receive "lock out" signals slightly delayed or time stamped with a slightly later time as described in U.S. Pat. No. 4,592,546. By providing a correspondingly delayed lock out to a viewer receiving their signal later, a potential advantage is mitigated.

Alternatively, this time equalization from cohort to cohort could, for example, involve artificially delaying the transmission of the game control data stream sent to all competitors cell phones or other mobile devices by the appropriate amount of seconds, to sufficiently minimize the advantage a player with a few more seconds of television based information would have. For example, by time stamping the "lock out" signal at an earlier event, such as when the team breaks from the huddle, the chance of some cohorts seeing the actual beginning of the play is eliminated and the discrepancy in propagation delay provides little or no advantage.

FIG. **1** illustrates a flowchart of a process of preventing latency issues from giving an advantage to some participants. In the step **100**, it is determined how each viewer receives a television signal, where possibilities include an over the air broadcast, a particular cable system or a particular satellite system. In the step **102**, it is determined if there is additional processing of the television signal when after the signal enters a viewer/participant's house, office, bar or other location from an item such as a DVR. In the step **104**, the viewers/participants are grouped into groups also referred to as cohorts. In the step **106**, a delay amount is determined for each group. The delay amount is able to be determined by the one or more methods as described above. In the step **108**, the viewers/participants are equalized. The methods of equalization vary, but some examples include time stamping on the game "lock out" signals, imposing a time stamp on the entire data stream so that competitors receiving their television information is slightly behind or ahead of others gain no material competitive advantage. Another method is for the game control server to send all the game control data to all of the viewers/participants of the game at the same time, and the client software is able to delay the presentation of the game data based on the viewers' group.

Arbitrarily Imposed Delays on the Broadcast of the Signal and the Physically Present Competitor

As a result of the Janet Jackson half time show episode at the 2004 Super Bowl, some networks have announced their

intentions to impose up to a 7 second delay on telecasts of live sporting events. More recently an obscenity uttered by a competitor at the conclusion of a live NASCAR race has resulted in another network announcing it may impose a 5-7 second delay on future broadcasts of NASCAR races. These arbitrarily imposed delays are a significantly longer duration than those resulting from the above described propagation delays of the broadcast television or cellular network control information.

A distinct advantage is able to arise for a game player who is physically present at an event being televised which is the basis of a contest of skill in the home, or other location, separate from the live game venue. This is because in certain instances they will receive "lock out" signals generated for competitors among the television viewing audience, particularly if the game producer is not physically present at the venue, but producing by viewing a telecast. This discrepancy would permit prediction entry as much as 7 seconds later than those watching an artificially delayed television picture. This magnitude of delay can result in a significant competitive advantage for the game player who is physically present. For example, a soccer or hockey contest of skill might contain an element where a competitor is given a limited number of opportunities to predict if there will be a "shot on goal" within the next 5 seconds. The 5 second advantage to the competitor physically present would be significant, because the receipt of a lockout signal generated for the huge television audience could occur after a shot had occurred.

In a contest based on a football game, a competitor present at the stadium would receive their "lock out" signals after the play was underway and could often determine whether the play was a pass or a run prior to receipt of the lockout signal. It is also likely that other live televised events such as The Oscars, Grammy's, beauty contests and other television programming that can support games of skill would impose delays on the telecast for the same or different reasons, also providing the opportunity for a competitive advantage for those who are attending the event in person.

The cellular telephone system currently has methodologies to determine a user's physical location. The 911 emergency laws mandate the cellular systems to have the capability of determining the location of a 911 emergency caller within 150 feet. More sophisticated approaches combine cellular site location technology with geosynchronous positioning satellite capabilities. Companies like Qualcomm™ have implemented various location technologies such as Snaptrack, Snap Smart and Snapcore, which provide a cellular phone's physical location within a matter of yards.

For each televised live event, the physical venue for this event would be known by the organizer of a game of skill in advance. Therefore, it is possible to determine for each contest of skill the specific cellular sites which will serve cellular phone owners physically present at that venue. A methodology is employed to identify all of the cellular phones logging into the game server registering to play the game of skill which are co-located within cellular sites servicing the stadium or auditorium where the televised live event is taking place. The present invention is also able to involve a communication methodology between the cellular carrier and the game control computer software contained in the game application resident on a game competitor's phone, which would identify the cellular phone physically in the stadium.

Before the start of the contest of skill, the system informs the central computer of the game selected to be played by each competitor, for example, the San Francisco 49ers versus the New York Giants. The central game control server's software would hold current information on the physical location of the stadium of each game, for example, Candlestick Park in South San Francisco, and the cellular sites covering this location. The software resident on the cellular phone or on the server then identifies the phone as one located physically at the telecast game's venue.

To ensure that potential competitors at the live venue are able to also compete in a contest of skill, the central game server will separate the scoring data and game control data for competitors using these cellular phones in this specific location from the general pool of competitors who are not so located, but watching the game via television. A separate contest is then generated and scored for those competitors who have the advantage of viewing the event live, and a separate prize pool is awarded. This separate game would be produced though the observation of the actual game physically at the venue or through the operation of a non-delayed satellite feed.

If it is ultimately determined that certain groups of television viewers, as opposed to live event attendees, who are competitors in these games of skill are gaining sufficient enough competitive advantage, segregating those players at the extreme ends of the propagation delays, into two or more separate contests with separate sets of prizes, may also be employed as described above. For example, separate contests for satellite viewers versus cable and over the air viewers are able to be generated.

FIG. **2** illustrates a flowchart of a process of preventing participants at a live event from having an unfair advantage over participants watching on television. In the step **200**, a cellular site that serves cellular phones at a venue site is determined for each contest of skill. For example, if a game of skill is played for a game between the San Francisco 49ers and the Oakland Raiders at Candlestick Park in South San Francisco, a specific cellular site serves the cellular phones in that location. In the step **202**, the cellular phones that are utilizing the cellular site of the venue site and are participating in the game of skill for that event are determined. For example, if there are 1,000 cellular phone users in Candlestick Park who register to play in a game of skill involving the 49ers and the Raiders, they are detected by the system. In the step **204**, it is determined if the cellular phone is located within the venue site. The determination is made by comparing the current cellular information with information stored on a server indicating the location of each venue such as Candlestick Park. Based on the determination in the step **204**, separate groups are generated in the step **206**. A group is generated for users that are located at the live venue, and a group is generated for those players that are watching live on television. Therefore, the live players who do not experience any delay compete against each other, and television viewers compete with others television viewers who have a delay.

In addition to implementing the above-mentioned solutions to latency issues, additional groups are able to be generated if the delays between signal providers are not resolved. For example, all viewers with satellite television signals compete against each other, and all cable television viewers compete against each other, with no cross competition.

Taped and Syndicated Television Programs

A separate but related latency problem arises in the case of syndicated television shows, which are by necessity pre-taped. Examples are game shows like Wheel of For-

tune™ and Jeopardy™. These pre-recorded television game shows are generally syndicated, meaning they are sold to a specific television station on an exclusive lease for the local television market served by the station's signal. The television stations generally air these half hour episodes at various times in "prime time access," which is generally considered between 6-8 pm. Therefore, with 3 different time zones in the United States, the start times will differ from market to market. In addition, the precise time each commercial bracketed television show segment that is broadcast is able to vary by a few seconds based on the time each station's engineering personnel starts the show's segments after the insertion of local and national commercials. Thus, for a show like JeopardyT™, there might be over 100 separate slightly different broadcasts from a time standpoint for a single episode of Jeopardy™ on a given day. In addition, these syndicated telecasts can also experience the same propagation delays as described above.

Contests of skill on cellular phones around these syndicated telecasts are produced with the cooperation of the game show producers, and game data files are produced which are precisely time-synchronized to the final video tape of the television game show. These files must be precisely synchronized and a delay of just a few seconds could give an unfair competitive advantage to a viewer who is receiving their "lock out" signal later than another competitor in a fast paced game like Jeopardy™. The game data files must be synchronized with the television show at the beginning of the program and again as the show returns to the game competition from each commercial break.

This solution addresses the separate, but related problems of synchronizing game data files with the broadcast of prerecorded and syndicated games, entertainment, reality or other television programming that is aired in different time zones at the choice of the purchasing television station. As opposed to live sporting events, the game production for this genre of programming is not done live through real-time observation of the unfolding telecast but is produced in advance with the cooperation of the show producer as a time synchronized file utilizing the final edited for broadcast, television program.

In general, the game data files are divided into separate "segments" which comprise the entire television program and aired between the insertion of national, regional and local advertising. As the television program returns from the opening commercials, the initial game or entertainment segment is launched by the game producer, synchronized to the playing of the television tape, and the data files for this segment would end with the first commercial break. The other game "chapters" are resynchronized as each segment of the telecast resumes from commercial break. The local telecasts might have variations of anywhere from 1 to 5 seconds, or more, resulting from the use of different commercials by different stations, and the variances in the local production by the engineering management of the syndicated telecasts.

This invention protects a system which first determines all of the separate and unique television markets where the cellular phone service will be offered in connection with a syndicated, taped version of an underlying television program, for example, Jeopardy™. Network broadcasts usually air in three separate time zones. This information is available from the shows syndicator, for example, Jeopardy™, the syndicator King World™ or Sony™, the show's licensor. This information is also publicly available through the various television guides. The game production servers hold the pre-produced game data files to be broadcast to the cellular phones of the participating subscribers, containing, for example, the correct answers and possibly some intentionally wrong multiple choice answers in the case of Jeopardy™ or other multiple choice based game shows. The server begins the broadcast of its time synchronized files for each discrete telecast of a single television program at a precise start point for each "segment" or chapter. With knowledge of the precise timing of the discrete segments of the broadcast, for each separate syndicated market, the server transmits the pre-recorded files in most cases, at a slightly separate and different time to each viewer who is viewing the telecast in a particular market via a particular broadcast, satellite or cable signal.

The precise start times of the beginning episode of a game show and the start times of the other segments, beginning as the show resumes after a national and local commercial are delivered to the server through various methodologies.

One methodology requires the cooperation of an employee of the game provider based on visual observation of the telecast for that market, utilizing a personal computer and the Internet, or by utilizing their local cellular phone, all coupled to the game server.

Another methodology includes utilizing an audio or video recognition system with online access to the broadcast of the underlying television program for each separate market which provides real-time tracking of the television broadcast to the game control server, ensuring the game data file is able to be precisely synchronized to the television picture. Information is also able to be inserted in a Vertical Banking Interval (VBI) of the taped syndicated show and tracked online in real time by the game control server. For remote telecasts and online connection from a remote device, reading data embedded in the VBI via a high speed connection to the central game server is utilized. Utilizing some of the procedures outlined above, the propagation delays in the receipt of the cellular transmissions are also monitored and the game server adjusts the data files containing the "lock outs" to accommodate the systemic delay in the delivery of the game data on the cellular networks.

Another methodology, with the cooperation of the producers of game shows, precise audio or video events in the telecast could either be added to the video, such as a visible count down, or existing events in the telecast identified by the producers as synchronization points which the competitors could utilize as start points for the previously downloaded data files at the press of an appropriate button on their cellular phone. This would trigger the launch of a program previously downloaded to the phone's RAM. Then, time synchronization would be launched.

One more methodology uses an audio signal, possibly sub-audible to humans, which is inserted into the taped audio track recognizable by the audio receiver in a cellular phone which would be utilized to start and/or continually keep the pre-produced data files resident on the cellular phone in synchronization with the telecast.

FIG. **3** illustrates a flowchart of a process of handling latency issues for taped programs. In the step **300**, pre-produced game data files are stored in servers; preferably, game production servers. The game data files include information required to participate in a game such as questions and answers for a trivia game like Jeopardy™. In the step **302**, start times are determined for each discrete telecast of a show. The start times are determined as described above, such as with the cooperation of a game provider employee, utilizing an audio/video recognition system, using a visible count down or a recognizable signal which is able to be recognized by a cellular phone. Other ways of determining

start times are possible as well. In the step **304**, the game data files are transmitted at appropriate times based on the start times for each separate market. Furthermore, if additional delays are recognized, such as those delays described above, that is able to be accounted for.

FIG. **4** illustrates a graphical representation of an embodiment of the present invention. A server **400** contains applications **402** and a storage mechanism **404**. The applications **402** include an application to generate and modify game control data. The game control data is eventually transferred to users' cellular phones. If necessary the game control data is synchronized and time-stamped for each group, so that, as described previously, there are no unfair advantages for the competitors. A location application stored on the server **400** is able to determine which cellular phones are logged into the server **400** and what their location is. A grouping application is able to separate information such as scoring data and game control data into different groups. The grouping application also separates the cellular phones into groups or cohorts as described above. The storage mechanism **404** is utilized for storing the applications **402** in addition to selections and results. The storage mechanism **404** preferably includes a database for organizing the data including the selections, results, standings and groups amongst other data needed for executing the competitions. The server **400** is part of a network **406**. A device **408** couples to the server **400** through the network **406**. In some embodiments the network **406** includes the Internet. In some embodiments, the network **406** includes a cellular network. Also, in some embodiments, the network **406** includes both the Internet and a cellular network. The device **408** is preferably a cellular phone. In other embodiments a PDA, a computer, a laptop or any other device capable of communicating with the server **400** is possible. The device **408** stores a variety of applications **410**. A game application is stored on the device **408**. In some embodiments, software to identify the physical location of the device **408** is stored on the device **408**. The device **408** also receives the game control data which ensures no competitors have an unfair advantage using the methodologies described above. Furthermore, the device **408** receives game data which is used to play the games. An example of game data includes Jeopardy™ multiple choice answers. Additional applications are able to be included on the server **400** and on the device **408**, as necessary, for smooth operation of the games. Although some of the applications are described separately above, in some embodiments, the applications are included in one large application.

FIG. **5** illustrates a graphical representation of a network of devices of the present invention. A server **400** is coupled to many devices through a network **406**. The devices are grouped into groups or cohorts as described above. For example, Group **1** of devices **500** includes a set of devices that receive a television signal through cable with a delay time of x. Group **2** of devices **502** includes a set of devices that receive a television signal through satellite with a delay time of y. Group **3** of devices **504** includes a set of devices that receive a television signal over the air with a delay time of z. Then, based on the delay times of each group, steps need to be taken to ensure these delays do not affect the ability of users to play a game of skill which corresponds to a live event shown on television. As described above, a lockout signal is sent at the appropriate time depending on the delay, or a lockout signal is sent, but included with the lockout signal is information for the lockout not to be implemented until the delay is accounted for. This ensures that users with different delays based on their television signal reception path do not receive advantages or disadvantages. Furthermore, in addition to the delays being related to the type of signal reception path such as cable versus satellite, the delays could also be related to other aspects of the signal reception path such as the location of the receiving television or the type of equipment that one television company uses versus another.

To utilize the present invention, for the most part, a participant in a game of skill playing on his/her mobile device does not have to perform any different actions when playing a standard game of skill without the present invention. The user simply plays as usual except that with the present invention, users with faster or slower connections do not receive any advantages or disadvantages. In embodiments which require user input, the user performs an action, such as recognizing an event to synchronize the game with a live or taped event. For game producers, implementing the present invention is able to be automated or performed manually. Automation includes technology to automatically determine the start of an event such as automatically detecting the start of a football game. Manual implementation requires a person to watch an event and respond to that event such as watching a football game and noting when the first play occurs in order to synchronize the "lock out" signal appropriately.

In operation, the present invention is able to synchronize separate games of skill which have different latencies based on television signal reception differences, random delays and/or other delays. For live events where all of the participants are watching the event on television and participating in a game of skill corresponding to that live event, delays related to the television signal reception differences have to be handled. Television signal reception differences occur because some televisions receive the live event signal via satellite, while others have cable and still others have something else. The signals do not arrive at the participants at the same time. Therefore, to ensure fair competition, participants are separated into groups or cohorts based on delivery system type, location and other parameters that affect the timing of the signal. Then, using a mechanism described above, the delay for each group is determined. Based on that determined delay, the game of skill is able to be configured with the appropriate timing for a lock out signal, so that each participant has the same amount of time to select an answer and also sees the same amount of the live event as others before the lock out occurs.

For games of skill where there are both participants attending the event live and watching it on television which typically has a few seconds delay, the participants are separated into different competitive groups wherein the attending participants are in one group and the television viewing participants are in another group.

For games of skill using tape recorded events like game shows, the important aspect is ensuring the game of skill corresponds with the televised recorded event. For example, if the game of skill were off by a few seconds, participants could receive multiple choice answers to the wrong questions. Therefore, the present invention ensures that the game of skill is synchronized with the taped televised event even when there are different latencies depending on how and where the television signal is being displayed.

Furthermore, although the methods of handling latency have been described above as handling a specific scenario such as delays in television signal reception, the methods are able to be used in conjunction with each other as well. For example, when participants are separated into attending and televised groups because some participants are actually

attending an event while others watch it on television, for those watching it on television there will still be issues from location to location and based on the television signal reception, so the latency balancer which handles that aspect of latency is also able to be implemented.

The present invention has been described in terms of specific embodiments incorporating details to facilitate the understanding of principles of construction and operation of the invention. Such reference herein to specific embodiments and details thereof is not intended to limit the scope of the claims appended hereto. It will be readily apparent to one skilled in the art that other various modifications may be made in the embodiment chosen for illustration without departing from the spirit and scope of the invention as defined by the claims.

What is claimed is:

1. A method of implementing a game of skill or chance or other entertainment comprising:

determining a geographic location of a device;

providing streaming content based on the geographic location of the device;

providing the game of skill or chance or other entertainment with the streaming content, wherein the game of skill or chance or other entertainment involves users making selections utilizing the game of skill or chance or other entertainment, wherein the selections are related to events that occur within the streaming content, and further wherein the game of skill or chance or other entertainment is related to the streaming content; and

triggering a lockout signal, utilizing a person attending the events related to the streaming content, to prevent the users from submitting a response to the game of skill or chance or other entertainment.

2. The method of claim **1** wherein the streaming content comprises an online broadcast.

3. The method of claim **1** wherein the streaming content comprises an esports competition.

4. The method of claim **1** wherein the streaming content comprises a trivia contest.

5. The method of claim **1** wherein the streaming content comprises a sporting competition.

6. The method of claim **1** wherein the streaming content comprises a television commercial.

7. The method of claim **1** wherein the streaming content comprises prerecorded television programming.

8. The method of claim **1** wherein the streaming content comprises an audio and/or video track utilized to synchronize the game of skill or chance or other entertainment.

9. The method of claim **1** further comprising determining a start time of the streaming content using a recognizable signal included within the streaming content.

10. The method of claim **1** wherein existing events in the streaming content are used as synchronization points for data files stored on the device.

11. The method of claim **1** wherein information is embedded in the streaming content and utilized to track the streaming content in real-time.

12. The method of claim **1** wherein a plurality of synchronization points are used to continuously ensure the game of skill or chance or other entertainment is synchronized with the streaming content.

13. The method of claim **1** further comprising determining an amount of delay for participants in separate cohorts participating in the game of skill or chance or other entertainment.

14. The method of claim **1** further comprising equalizing receipt of the game of skill or chance or other entertainment and the streaming content regardless of the geographic location of the device including delaying the receipt of the game of skill or chance or other entertainment by an amount and preventing entry of a selection after a result is known.

15. The method of claim **1** wherein determining the geographic location comprises utilizing automatic content recognition.

16. The method of claim **1** wherein determining the geographic location comprises utilizing an Internet connection to determine the geographic location of a smart television set.

17. The method of claim **1** wherein determining the geographic location is performed by a server.

18. The method of claim **1** wherein determining the geographic location comprises utilizing a cellular network to determine the geographic location.

19. The method of claim **1** wherein the users are grouped based on skill level.

20. A method of implementing a game of skill or chance or other entertainment comprising:

determining a geographic location of each device of a set of devices;

providing a content stream to each device based on the geographic location;

providing the game of skill or chance or other entertainment with the content stream, wherein the game of skill or chance or other entertainment involves users making selections related to events that occur within the content stream;

preventing entry of a selection in the game of skill or chance or other entertainment after a result is known by sending a lockout signal, utilizing a person attending the events related to the streaming content, to prevent the users from submitting a response to the game of skill or chance or other entertainment; and

delivering the content stream and synchronized game data to each device of the set of devices.

21. The method of claim **20** wherein the content stream comprises an online broadcast.

22. The method of claim **20** wherein the content stream comprises an esports competition.

23. The method of claim **20** wherein the content stream comprises a sporting competition.

24. The method of claim **20** wherein the streaming content comprises a television commercial.

25. The method of claim **20** wherein the streaming content comprises prerecorded television programming.

26. The method of claim **20** wherein synchronizing and delivering are performed by a server device.

27. The method of claim **20** wherein the content stream comprises one or more separate contest streams.

28. The method of claim **27** wherein the one or more separate contest streams each relate to different broadcast athletic events accessible within a single application.

29. The method of claim **20** wherein determining the geographic location comprises utilizing automatic content recognition.

30. The method of claim **20** wherein determining the geographic location comprises utilizing an Internet connection to determine the geographic location of a smart television set.

31. The method of claim **20** wherein determining the geographic location is performed by a server.

32. The method of claim 20 wherein determining the geographic location comprises utilizing a cellular network to determine the geographic location.

33. The method of claim 20 further comprising determining a time to send the lockout signal based on a nature of the events.

34. The method of claim 33 wherein the nature of the events is based on the content stream.

35. A method of implementing a game of skill or chance or other entertainment comprising:

determining a geographic location of a device;

receiving streaming content based on the geographic location of the device;

providing the game of skill or chance or other entertainment with the streaming content, wherein the game of skill or chance or other entertainment involves users making selections utilizing the game of skill or chance or other entertainment, wherein the selections are related to events that occur within the streaming content, and further wherein the game of sill or chance or other entertainment is related to the streaming content;

triggering a lockout signal, utilizing a person attending the events related to the streaming content, to prevent the users from submitting a response to the game of skill or chance or other entertainment; and

presenting the streaming content and the game of skill or chance or other entertainment on the device.

36. The method of claim 35 wherein the streaming content comprises an online broadcast.

37. The method of claim 35 wherein the streaming content comprises an esports competition.

38. The method of claim 35 wherein the streaming content comprises a sporting competition.

39. The method of claim 35 wherein the streaming content comprises a television commercial.

40. The method of claim 35 wherein the streaming content comprises prerecorded television programming.

41. The method of claim 35 wherein the game of skill or chance or other entertainment and the streaming content are presented using an application.

42. The method of claim 41 wherein the application is a single application that displays the game of skill or chance or other entertainment and the streaming content within the single application.

43. The method of claim 35 wherein determining the geographic location comprises utilizing automatic content recognition.

44. The method of claim 35 wherein determining the geographic location comprises utilizing an Internet connection to determine the geographic location of a smart television set.

45. The method of claim 35 wherein determining the geographic location is performed by a server.

46. The method of claim 35 wherein determining the geographic location comprises utilizing a cellular network to determine the geographic location.

47. A method of implementing a game of skill or chance or other entertainment comprising:

determining a geographic location of each device of a set of devices;

determining a service provider for each participant of the game of skill or chance or other entertainment;

receiving a content stream based on the geographic location of each device;

providing the game of skill or chance or other entertainment with the content stream, wherein the game of skill or chance or other entertainment involves users making selections utilizing the game of skill or chance or other entertainment, wherein the selections are related to events that occur within the streaming content, and further wherein the game of skill or chance or other entertainment is related to the streaming content;

sending a lockout signal, utilizing a person attending a physical location where the events related to the streaming content take place, to prevent the users from submitting a response to the game of skill or chance or other entertainment; and

delivering the content stream and synchronized game data to each device of the set of devices.

48. The method of claim 47 wherein determining the service provider is performed by a server device.

49. The method of claim 47 wherein determining the service provider is performed by a client device.

50. The method of claim 47 wherein the content stream and the synchronized game data of the game of skill or chance or other entertainment are presented on a same screen.

51. The method of claim 47 wherein the content stream comprises an esports competition.

52. The method of claim 47 wherein the content stream comprises a sporting competition.

53. The method of claim 47 wherein the streaming content comprises a television commercial.

54. The method of claim 47 wherein the streaming content comprises prerecorded television programming.

55. The method of claim 47 wherein determining the geographic location comprises utilizing automatic content recognition.

56. The method of claim 47 wherein determining the geographic location comprises utilizing an Internet connection to determine the geographic location of a smart television set.

57. The method of claim 47 wherein determining the geographic location is performed by a server.

58. The method of claim 47 wherein determining the geographic location comprises utilizing a cellular network to determine the geographic location.

59. The method of claim 47 further comprising determining a time to send the lockout signal based on a nature of the events.

60. The method of claim 59 wherein the nature of the events is based on the content stream.

* * * * *

Exhibit 2

US011235237B2

(12) **United States Patent**
Lockton et al.

(10) **Patent No.: US 11,235,237 B2**
(45) **Date of Patent: *Feb. 1, 2022**

(54) **METHODOLOGY FOR EQUALIZING SYSTEMIC LATENCIES IN TELEVISION RECEPTION IN CONNECTION WITH GAMES OF SKILL PLAYED IN CONNECTION WITH LIVE TELEVISION PROGRAMMING**

(71) Applicant: **Winview, Inc.**, Redwood City, CA (US)

(72) Inventors: **David B. Lockton**, Redwood City, CA (US); **Mark K. Berner**, Santa Clara, CA (US); **Mark J. Micheli**, San Francisco, CA (US); **David Lowe**, Foster City, CA (US)

(73) Assignee: **Winview, Inc.**, Redwood City, CA (US)

(*) Notice: Subject to any disclaimer, the term of this patent is extended or adjusted under 35 U.S.C. 154(b) by 0 days.

This patent is subject to a terminal disclaimer.

(21) Appl. No.: **17/133,366**

(22) Filed: **Dec. 23, 2020**

(65) **Prior Publication Data**

US 2021/0113920 A1 Apr. 22, 2021

Related U.S. Application Data

(60) Continuation of application No. 16/177,118, filed on Oct. 31, 2018, now Pat. No. 10,874,942, which is a (Continued)

(51) **Int. Cl.**
A63F 13/358 (2014.01)
A63F 13/335 (2014.01)
(Continued)

(52) **U.S. Cl.**
CPC ***A63F 13/358*** (2014.09); ***A63F 13/216*** (2014.09); ***A63F 13/22*** (2014.09);
(Continued)

(58) **Field of Classification Search**
CPC A63F 13/50
See application file for complete search history.

(56) **References Cited**

U.S. PATENT DOCUMENTS

2,831,105 A 4/1958 Parker
3,562,650 A 2/1971 Gossard et al.
(Continued)

FOREIGN PATENT DOCUMENTS

CA 2252074 11/1997
CA 2252021 11/1998
(Continued)

OTHER PUBLICATIONS

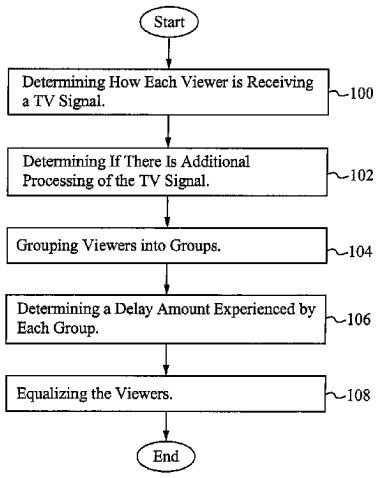
Two Way TV Patent and Filing Map www.twowaytv.com/version4/technologies/tech_patents.asp.
(Continued)

Primary Examiner — Seng H Lim
(74) *Attorney, Agent, or Firm* — Haverstock & Owens LLP

(57) **ABSTRACT**

A method of and system for handling latency issues encountered in producing real-time entertainment such as games of skill synchronized with live or taped televised events is described herein. There are multiple situations that are dealt with regarding latencies in receiving a television signal with respect to real-time entertainment based on the unfolding games played along with the telecasts. Systemic delays, arbitrarily imposed delays of a broadcast signal and variances in the precise broadcast times of taped television programs have to be equalized so as to provide fair entertainment.

119 Claims, 5 Drawing Sheets



Related U.S. Application Data

continuation of application No. 15/900,438, filed on Feb. 20, 2018, now Pat. No. 10,150,031, which is a continuation of application No. 15/648,101, filed on Jul. 12, 2017, now Pat. No. 9,919,211, which is a continuation of application No. 15/263,186, filed on Sep. 12, 2016, now Pat. No. 9,744,453, which is a division of application No. 14/172,571, filed on Feb. 4, 2014, now Pat. No. 9,604,140, which is a continuation of application No. 13/681,172, filed on Nov. 19, 2012, now Pat. No. 8,699,168, which is a division of application No. 13/403,845, filed on Feb. 23, 2012, now Pat. No. 8,717,701, which is a continuation of application No. 11/786,992, filed on Apr. 12, 2007, now Pat. No. 8,149,530.

(60) Provisional application No. 60/791,793, filed on Apr. 12, 2006.

(51) **Int. Cl.**

A63F 13/332	(2014.01)
A63F 13/216	(2014.01)
A63F 13/795	(2014.01)
A63F 13/338	(2014.01)
H04N 21/472	(2011.01)
H04N 21/61	(2011.01)
H04N 5/04	(2006.01)
H04N 21/436	(2011.01)
H04N 21/27	(2011.01)
H04N 21/43	(2011.01)
H04N 21/435	(2011.01)
H04N 21/478	(2011.01)
A63F 13/22	(2014.01)
A63F 13/92	(2014.01)
H04N 21/2385	(2011.01)
H04N 21/258	(2011.01)
H04N 21/442	(2011.01)
H04N 21/45	(2011.01)
A63F 13/32	(2014.01)
A63F 13/285	(2014.01)
A63F 13/50	(2014.01)
H04N 21/24	(2011.01)

(52) **U.S. Cl.**

CPC ***A63F 13/285*** (2014.09); ***A63F 13/32*** (2014.09); ***A63F 13/332*** (2014.09); ***A63F 13/335*** (2014.09); ***A63F 13/338*** (2014.09); ***A63F 13/50*** (2014.09); ***A63F 13/795*** (2014.09); ***A63F 13/92*** (2014.09); ***H04N 5/04*** (2013.01); ***H04N 21/2385*** (2013.01); ***H04N 21/24*** (2013.01); ***H04N 21/25866*** (2013.01); ***H04N 21/27*** (2013.01); ***H04N 21/4302*** (2013.01); ***H04N 21/435*** (2013.01); ***H04N 21/43615*** (2013.01); ***H04N 21/44209*** (2013.01); ***H04N 21/4508*** (2013.01); ***H04N 21/4781*** (2013.01); ***H04N 21/47217*** (2013.01); ***H04N 21/6131*** (2013.01); *A63F 2300/406* (2013.01); *A63F 2300/407* (2013.01); *A63F 2300/409* (2013.01); *A63F 2300/534* (2013.01)

(56) **References Cited**

U.S. PATENT DOCUMENTS

4,141,548	A *	2/1979	Everton	A63F 7/06 463/36
4,270,755	A	6/1981	Willhide et al.	
4,386,377	A	5/1983	Hunter, Jr.	
4,496,148	A	1/1985	Morstain et al.	
4,521,803	A	6/1985	Glittinger	
4,592,546	A *	6/1986	Fascenda	A63F 3/064 463/29
4,816,904	A	3/1989	McKenna et al.	
4,918,603	A	4/1990	Hughes et al.	
4,930,010	A	5/1990	MacDonald	
5,013,038	A	5/1991	Luvenberg	
5,018,736	A	5/1991	Pearson et al.	
5,035,422	A	7/1991	Berman	
5,073,931	A	12/1991	Audebert et al.	
5,083,271	A	1/1992	Thatcher et al.	
5,083,800	A	1/1992	Lockton	
5,119,295	A	6/1992	Kapur	
5,120,076	A	6/1992	Luxenberg et al.	
5,213,337	A	5/1993	Sherman	
5,227,874	A	7/1993	Von Kohom	
5,256,863	A	10/1993	Ferguson	
5,263,723	A	11/1993	Pearson et al.	
5,283,734	A	2/1994	Von Kohom	
5,327,485	A	7/1994	Leaden	
5,343,236	A	8/1994	Koppe et al.	
5,343,239	A	8/1994	Lappington et al.	
5,417,424	A	5/1995	Snowden	
5,462,275	A	10/1995	Lowe et al.	
5,479,492	A	12/1995	Hofstee et al.	
5,488,659	A	1/1996	Millani	
5,519,433	A	5/1996	Lappington	
5,530,483	A	6/1996	Cooper	
5,553,120	A	9/1996	Katz	
5,566,291	A	10/1996	Boulton et al.	
5,585,975	A	12/1996	Bliss	
5,586,257	A	12/1996	Perlman	
5,589,765	A	12/1996	Ohmart et al.	
5,594,938	A	1/1997	Engel	
5,618,232	A	4/1997	Martin	
5,628,684	A	5/1997	Jean-Etienne	
5,636,920	A	6/1997	Shur et al.	
5,638,113	A	6/1997	Lappington	
5,643,088	A	7/1997	Vaughn et al.	
5,663,757	A	9/1997	Morales	
5,759,101	A	6/1998	Won Kohom	
5,761,606	A	6/1998	Wolzien	
5,762,552	A	6/1998	Voung et al.	
5,764,275	A	6/1998	Lappington et al.	
5,794,210	A	8/1998	Goldhaber et al.	
5,805,230	A	9/1998	Staron	
5,813,913	A *	9/1998	Berner	A63F 13/10 463/40
5,818,438	A	10/1998	Howe et al.	
5,828,843	A	10/1998	Grimm	
5,838,774	A	11/1998	Weiser, Jr.	
5,838,909	A	11/1998	Roy	
5,846,132	A	12/1998	Junkin	
5,848,397	A	12/1998	Marsh et al.	
5,860,862	A	1/1999	Junkin	
5,894,556	A	4/1999	Grimm	
5,916,024	A	6/1999	Von Kohom	
5,870,683	A	9/1999	Wells et al.	
5,970,143	A	10/1999	Schneier et al.	
5,971,854	A	10/1999	Pearson et al.	
5,987,440	A	11/1999	O'Neil et al.	
6,009,458	A	12/1999	Hawkins et al.	
6,015,344	A	1/2000	Kelly et al.	
6,016,337	A	1/2000	Pykalisto	
6,038,599	A	3/2000	Black	
6,042,477	A	3/2000	Addink	
6,064,449	A	5/2000	White	
6,104,815	A	8/2000	Alcorn et al.	
6,110,041	A	8/2000	Walker et al.	
6,117,013	A	9/2000	Elba	
6,126,543	A	10/2000	Friedman	
6,128,660	A	10/2000	Grimm	
6,135,881	A	10/2000	Abbott et al.	
6,174,237	B1	1/2001	Stephenson	
6,182,084	B1	1/2001	Cockrell et al.	
6,193,610	B1	2/2001	Junkin	
6,222,642	B1	4/2001	Farrell et al.	

(56) **References Cited**

U.S. PATENT DOCUMENTS

6,233,736 B1 5/2001 Wolzien
6,251,017 B1 6/2001 Leason et al.
6,263,447 B1 7/2001 French
6,267,670 B1 7/2001 Walker
6,287,199 B1 9/2001 McKeown et al.
6,293,868 B1 9/2001 Bernard
6,312,336 B1 11/2001 Handelman et al.
6,343,320 B1 1/2002 Fairchild
6,345,297 B1 2/2002 Grimm
6,371,855 B1 4/2002 Gavriloff
6,373,462 B1 4/2002 Pan
6,411,969 B1 6/2002 Tam
6,416,414 B1 7/2002 Stadelmann
6,418,298 B1 7/2002 Sonnenfeld
6,425,828 B2 7/2002 Walker et al.
6,434,398 B1 8/2002 Inselberg
6,446,262 B1 9/2002 Malaure et al.
6,470,180 B1 10/2002 Kotzin et al.
6,475,090 B2 11/2002 Gregory
6,524,189 B1 2/2003 Rautila
6,527,641 B1 3/2003 Sinclair et al.
6,530,082 B1 3/2003 Del Sesto et al.
6,536,037 B1 3/2003 Guheen et al.
6,578,068 B1 6/2003 Bowma-Amuah
6,594,098 B1 7/2003 Sutardja
6,604,997 B2 7/2003 Saidakovsky et al.
6,610,953 B1 8/2003 Tao et al.
6,648,760 B1 11/2003 Nicastro
6,659,860 B1 12/2003 Yamamoto et al.
6,659,861 B1 12/2003 Faris
6,659,872 B1 12/2003 Kaufman et al.
6,690,661 B1 2/2004 Agarwal et al.
6,697,869 B1 2/2004 Mallart
6,718,350 B1 4/2004 Karbowski
6,752,396 B2 6/2004 Smith
6,758,754 B1 7/2004 Lavanchy et al.
6,758,755 B2 7/2004 Kelly et al.
6,760,595 B2 7/2004 Insellberg
6,763,377 B1 7/2004 Balknap et al.
6,766,524 B1 7/2004 Matheny et al.
6,774,926 B1 8/2004 Ellis et al.
6,785,561 B1 8/2004 Kim
6,801,380 B1 10/2004 Saturdja
6,806,889 B1 10/2004 Malaure et al.
6,807,675 B1 10/2004 Millard et al.
6,811,482 B2 11/2004 Letovsky
6,811,487 B2 11/2004 Sengoku
6,816,628 B1 11/2004 Sarachik et al.
6,817,947 B2 11/2004 Tanskanen
6,824,469 B2 11/2004 Allibhoy et al.
6,837,789 B2 1/2005 Garahi et al.
6,837,791 B1 1/2005 McNutt et al.
6,840,861 B2 1/2005 Jordan et al.
6,845,389 B1 1/2005 Sen
6,846,239 B2 1/2005 Washio
6,857,122 B1 2/2005 Takeda et al.
6,863,610 B2 3/2005 Vancraeynest
6,870,720 B2 3/2005 Iwata et al.
6,871,226 B1 3/2005 Ensley et al.
6,873,610 B1 3/2005 Noever
6,884,166 B2 4/2005 Leen et al.
6,884,172 B1 4/2005 Lloyd et al.
6,887,159 B2 5/2005 Leen et al.
6,888,929 B1 5/2005 Saylor
6,893,347 B1 5/2005 Zilliacus et al.
6,898,762 B2 5/2005 Ellis et al.
6,899,628 B2 5/2005 Leen et al.
6,903,681 B2 6/2005 Faris
6,908,389 B1 6/2005 Puskala
6,942,574 B1 9/2005 LeMay et al.
6,944,228 B1 9/2005 Dakss et al.
6,960,088 B1 11/2005 Long
6,978,053 B1 12/2005 Sarachik et al.
7,001,279 B1 2/2006 Barber et al.
7,029,394 B2 4/2006 Leen et al.
7,035,626 B1 4/2006 Luciano, Jr.
7,035,653 B2 4/2006 Simon et al.
7,058,592 B1 6/2006 Heckerman et al.
7,076,434 B1 7/2006 Newman et al.
7,085,552 B2 8/2006 Buckley
7,116,310 B1 10/2006 Evans et al.
7,117,517 B1 10/2006 Milazzo et al.
7,120,924 B1 10/2006 Katcher et al.
7,124,410 B2 10/2006 Berg
7,125,336 B2 10/2006 Anttila et al.
7,136,871 B2 11/2006 Ozer et al.
7,144,011 B2 12/2006 Asher et al.
7,169,050 B1 1/2007 Tyler
7,187,658 B2 3/2007 Koyanagi
7,191,447 B1 3/2007 Ellis et al.
7,192,352 B2 3/2007 Walker et al.
7,194,758 B1 3/2007 Waki et al.
7,228,349 B2 6/2007 Barone, Jr. et al.
7,231,630 B2 6/2007 Acott et al.
7,233,922 B2 6/2007 Asher et al.
7,240,093 B1 7/2007 Danieli et al.
7,244,181 B2 7/2007 Wang et al.
7,249,367 B2 7/2007 Bove, Jr. et al.
7,254,605 B1 8/2007 Strum
7,260,782 B2 8/2007 Wallace et al.
RE39,818 E 9/2007 Slifer
7,283,830 B2 10/2007 Buckley
7,288,027 B2 10/2007 Overton
7,341,517 B2 3/2008 Asher et al.
7,343,617 B1 3/2008 Kartcher et al.
7,347,781 B2 3/2008 Schultz
7,351,149 B1 4/2008 Simon et al.
7,367,042 B1 4/2008 Dakss et al.
7,379,705 B1 5/2008 Rados et al.
7,389,144 B1 6/2008 Osorio
7,430,718 B2 9/2008 Gariepy-Viles
7,452,273 B2 11/2008 Amaitis et al.
7,460,037 B2 12/2008 Cattone et al.
7,461,067 B2 12/2008 Dewing et al.
7,502,610 B2 3/2009 Maher
7,510,474 B2 3/2009 Carter, Sr.
7,517,282 B1 4/2009 Pryor
7,534,169 B2 5/2009 Amaitis et al.
7,543,052 B1 6/2009 Cesa Klein
7,562,134 B1 7/2009 Fingerhut et al.
7,602,808 B2 10/2009 Ullmann
7,610,330 B1 10/2009 Quinn
7,614,944 B1 11/2009 Hughes et al.
7,630,986 B1 12/2009 Herz et al.
7,693,781 B2 4/2010 Asher et al.
7,699,707 B2 4/2010 Bahou
7,702,723 B2 4/2010 Dyl
7,711,628 B2 5/2010 Davie et al.
7,729,286 B2 6/2010 Mishra
7,753,772 B1 7/2010 Walker
7,753,789 B2 7/2010 Walker et al.
7,780,528 B2 8/2010 Hirayama
7,828,661 B1 11/2010 Fish
7,835,961 B2 11/2010 Davie et al.
7,860,993 B2 12/2010 Chintala
7,886,003 B2 2/2011 Newman
7,907,211 B2 3/2011 Oostveen et al.
7,907,598 B2 3/2011 Anisimov
7,925,756 B1 4/2011 Riddle
7,926,810 B2 4/2011 Fisher et al.
7,937,318 B2 5/2011 Davie et al.
7,941,482 B2 5/2011 Bates
7,941,804 B1 5/2011 Herington
7,976,389 B2 7/2011 Cannon et al.
8,002,618 B1 8/2011 Lockton et al.
8,006,314 B2 8/2011 Wold
8,025,565 B2 9/2011 Leen et al.
8,028,315 B1 9/2011 Barber
8,082,150 B2 12/2011 Wold
8,086,445 B2 12/2011 Wold et al.
8,086,510 B2 12/2011 Amaitis et al.
8,092,303 B2 1/2012 Amaitis et al.
8,105,141 B2 1/2012 Leen et al.
8,107,674 B2 1/2012 Davis et al.

(56) **References Cited**

U.S. PATENT DOCUMENTS

8,109,827 B2 2/2012 Cahill et al.
8,128,474 B2 3/2012 Amaitis et al.
8,147,313 B2 4/2012 Amaitis et al.
8,147,373 B2 4/2012 Amaitis et al.
8,149,530 B1 4/2012 Lockton et al.
8,155,637 B2 4/2012 Fujisawa
8,162,759 B2 4/2012 Yamaguchi
8,176,518 B1 5/2012 Junkin et al.
8,186,682 B2 5/2012 Amaitis et al.
8,204,808 B2 6/2012 Amaitis et al.
8,219,617 B2 7/2012 Ashida
8,240,669 B2 8/2012 Asher et al.
8,246,048 B2 8/2012 Amaitis et al.
8,267,403 B2 9/2012 Fisher et al.
8,342,924 B2 1/2013 Leen et al.
8,342,942 B2 1/2013 Amaitis et al.
8,353,763 B2 * 1/2013 Amaitis G07F 17/3288 463/28
8,376,855 B2 2/2013 Lockton et al.
8,396,001 B2 * 3/2013 Jung H04W 4/021 370/252
8,397,257 B1 3/2013 Barber
8,465,021 B2 6/2013 Asher et al.
8,473,393 B2 6/2013 Davie et al.
8,474,819 B2 7/2013 Asher et al.
8,535,138 B2 9/2013 Amaitis et al.
8,538,563 B1 9/2013 Barber
8,543,487 B2 9/2013 Asher et al.
8,555,313 B2 10/2013 Newman
8,556,691 B2 10/2013 Leen et al.
8,585,490 B2 11/2013 Amaitis et al.
8,622,798 B2 1/2014 Lockton et al.
8,632,392 B2 1/2014 Shore et al.
8,638,517 B2 1/2014 Lockton et al.
8,641,511 B2 2/2014 Ginsberg et al.
8,659,848 B2 2/2014 Lockton et al.
8,672,751 B2 3/2014 Leen et al.
8,699,168 B2 4/2014 Lockton et al.
8,705,195 B2 4/2014 Lockton
8,708,789 B2 4/2014 Asher et al.
8,717,701 B2 5/2014 Lockton et al.
8,727,352 B2 5/2014 Amaitis et al.
8,734,227 B2 5/2014 Leen et al.
8,737,004 B2 5/2014 Lockton et al.
8,738,694 B2 5/2014 Huske et al.
8,771,058 B2 7/2014 Alderucci et al.
8,780,482 B2 7/2014 Lockton et al.
8,805,732 B2 8/2014 Davie et al.
8,813,112 B1 8/2014 Cibula et al.
8,814,664 B2 8/2014 Amaitis et al.
8,817,408 B2 8/2014 Lockton et al.
8,837,072 B2 9/2014 Lockton et al.
8,849,225 B1 9/2014 Choti
8,849,255 B2 9/2014 Choti
8,858,313 B1 10/2014 Selfors
8,870,639 B2 10/2014 Lockton et al.
8,935,715 B2 1/2015 Cibula et al.
9,056,251 B2 6/2015 Lockton
9,067,143 B2 6/2015 Lockton et al.
9,069,651 B2 6/2015 Barber
9,076,303 B1 7/2015 Park
9,098,883 B2 8/2015 Asher et al.
9,111,417 B2 8/2015 Leen et al.
9,205,339 B2 12/2015 Cibula et al.
9,233,293 B2 1/2016 Lockton
9,258,601 B2 2/2016 Lockton et al.
9,270,789 B2 2/2016 Huske et al.
9,289,692 B2 3/2016 Barber
9,306,952 B2 4/2016 Burman et al.
9,314,686 B2 4/2016 Lockton
9,314,701 B2 4/2016 Lockton et al.
9,355,518 B2 5/2016 Amaitis et al.
9,406,189 B2 8/2016 Scott et al.
9,430,901 B2 8/2016 Amaitis et al.
9,457,272 B2 10/2016 Lockton et al.
9,498,724 B2 11/2016 Lockton et al.
9,501,904 B2 11/2016 Lockton
9,504,922 B2 11/2016 Lockton et al.
9,511,287 B2 12/2016 Lockton et al.
9,526,991 B2 12/2016 Lockton et al.
9,536,396 B2 1/2017 Amaitis et al.
9,556,991 B2 1/2017 Furuya
9,604,140 B2 3/2017 Lockton et al.
9,652,937 B2 5/2017 Lockton
9,662,576 B2 5/2017 Lockton et al.
9,662,577 B2 5/2017 Lockton et al.
9,672,692 B2 6/2017 Lockton
9,687,738 B2 6/2017 Lockton et al.
9,687,739 B2 6/2017 Lockton et al.
9,707,482 B2 7/2017 Lockton et al.
9,716,918 B1 7/2017 Lockton et al.
9,724,603 B2 8/2017 Lockton et al.
9,744,453 B2 8/2017 Lockton et al.
9,805,549 B2 10/2017 Asher et al.
9,821,233 B2 11/2017 Lockton et al.
9,878,243 B2 1/2018 Lockton et al.
9,881,337 B2 1/2018 Jaycob et al.
9,901,820 B2 2/2018 Lockton et al.
9,908,053 B2 3/2018 Lockton et al.
9,919,210 B2 3/2018 Lockton
9,919,211 B2 3/2018 Lockton et al.
9,919,221 B2 3/2018 Lockton et al.
9,978,217 B2 5/2018 Lockton
9,993,730 B2 6/2018 Lockton et al.
9,999,834 B2 6/2018 Lockton et al.
10,052,557 B2 8/2018 Lockton et al.
10,089,815 B2 10/2018 Asher et al.
10,096,210 B2 10/2018 Amaitis et al.
10,137,369 B2 11/2018 Lockton et al.
10,150,031 B2 12/2018 Lockton et al.
10,165,339 B2 12/2018 Huske et al.
10,186,116 B2 1/2019 Lockton
10,195,526 B2 2/2019 Lockton et al.
10,226,698 B1 3/2019 Lockton et al.
10,226,705 B2 3/2019 Lockton et al.
10,232,270 B2 3/2019 Lockton et al.
10,248,290 B2 4/2019 Galfond
10,279,253 B2 5/2019 Lockton
10,653,955 B2 5/2020 Lockton
10,695,672 B2 6/2020 Lockton et al.
10,709,987 B2 7/2020 Lockton et al.
10,721,543 B2 7/2020 Huske et al.
2001/0004609 A1 6/2001 Walker et al.
2001/0005670 A1 6/2001 Lahtinen
2001/0013067 A1 8/2001 Koyanagi
2001/0013125 A1 8/2001 Kitsukawa et al.
2001/0020298 A1 9/2001 Rector, Jr. et al.
2001/0032333 A1 10/2001 Flickinger
2001/0036272 A1 11/2001 Hirayama
2001/0036853 A1 11/2001 Thomas
2001/0044339 A1 11/2001 Cordero
2001/0054019 A1 12/2001 de Fabrega
2002/0010789 A1 1/2002 Lord
2002/0018477 A1 2/2002 Katz
2002/0026321 A1 2/2002 Faris
2002/0029381 A1 3/2002 Inselberg
2002/0035609 A1 3/2002 Lessard
2002/0037766 A1 3/2002 Muniz
2002/0069265 A1 3/2002 Bountour
2002/0042293 A1 4/2002 Ubale et al.
2002/0046099 A1 4/2002 Frengut et al.
2002/0054088 A1 5/2002 Tanskanen et al.
2002/0055385 A1 5/2002 Otsu
2002/0056089 A1 5/2002 Houston
2002/0059094 A1 5/2002 Hosea et al.
2002/0059623 A1 5/2002 Rodriguez et al.
2002/0069076 A1 6/2002 Faris
2002/0076084 A1 6/2002 Tian
2002/0078176 A1 6/2002 Nomura et al.
2002/0083461 A1 6/2002 Hutcheson
2002/0091833 A1 7/2002 Grimm
2002/0095333 A1 7/2002 Jokinen et al.
2002/0097983 A1 7/2002 Wallace et al.
2002/0099709 A1 7/2002 Wallace

(56) **References Cited**

U.S. PATENT DOCUMENTS

2002/0100063 A1 7/2002 Herigstad et al.
2002/0103696 A1 8/2002 Huang et al.
2002/0105535 A1 8/2002 Wallace et al.
2002/0107073 A1 8/2002 Binney
2002/0108112 A1 8/2002 Wallace et al.
2002/0108125 A1 8/2002 Joao
2002/0108127 A1 8/2002 Lew et al.
2002/0112249 A1 8/2002 Hendricks et al.
2002/0115488 A1 8/2002 Berry et al.
2002/0119821 A1 8/2002 Sen
2002/0120930 A1 8/2002 Yona
2002/0124247 A1 9/2002 Houghton
2002/0132614 A1 9/2002 Vanlujit et al.
2002/0133817 A1 9/2002 Markel
2002/0133827 A1 9/2002 Newman et al.
2002/0142843 A1 10/2002 Roelofs
2002/0144273 A1 10/2002 Reto
2002/0147049 A1 10/2002 Carter, Sr.
2002/0157002 A1 10/2002 Messerges et al.
2002/0157005 A1 10/2002 Bunk
2002/0159576 A1 10/2002 Adams
2002/0162031 A1 10/2002 Levin et al.
2002/0162117 A1 10/2002 Pearson
2002/0165020 A1 11/2002 Koyama
2002/0165025 A1 11/2002 Kawahara
2002/0177483 A1 11/2002 Cannon
2002/0187825 A1 12/2002 Tracy
2002/0198050 A1 12/2002 Patchen
2003/0002638 A1 1/2003 Kaars
2003/0013528 A1 1/2003 Allibhoy et al.
2003/0023547 A1 1/2003 France
2003/0040363 A1 2/2003 Sandberg
2003/0054885 A1 3/2003 Pinto et al.
2003/0060247 A1 3/2003 Goldberg et al.
2003/0066089 A1 4/2003 Anderson
2003/0069828 A1 4/2003 Blazey et al.
2003/0070174 A1 4/2003 Solomon
2003/0078924 A1 4/2003 Liechty et al.
2003/0086691 A1 5/2003 Yu
2003/0087652 A1 5/2003 Simon et al.
2003/0088648 A1 5/2003 Bellaton
2003/0114224 A1 6/2003 Anttila et al.
2003/0115152 A1 6/2003 Flaherty
2003/0134678 A1 7/2003 Tanaka
2003/0144017 A1 7/2003 Inselberg
2003/0154242 A1 8/2003 Hayes et al.
2003/0165241 A1 9/2003 Fransdonk
2003/0177167 A1 9/2003 Lafage et al.
2003/0177504 A1 9/2003 Paulo et al.
2003/0189668 A1 10/2003 Newman et al.
2003/0195023 A1 10/2003 Di Cesare
2003/0195807 A1 10/2003 Maggio
2003/0208579 A1 11/2003 Brady et al.
2003/0211856 A1 11/2003 Zilliacus
2003/0212691 A1 11/2003 Kuntala et al.
2003/0216185 A1 11/2003 Varley
2003/0216857 A1 11/2003 Feldman et al.
2003/0228866 A1 12/2003 Pezeshki
2003/0233425 A1 12/2003 Lyons et al.
2004/0005919 A1 1/2004 Walker et al.
2004/0014524 A1 1/2004 Pearlman
2004/0022366 A1 2/2004 Ferguson et al.
2004/0025190 A1* 2/2004 McCalla H04N 21/8173 725/133
2004/0056897 A1 3/2004 Ueda
2004/0060063 A1 3/2004 Russ et al.
2004/0073915 A1 4/2004 Dureau
2004/0088729 A1 5/2004 Petrovic et al.
2004/0093302 A1 5/2004 Baker et al.
2004/0152454 A1 5/2004 Kauppinen
2004/0107138 A1 6/2004 Maggio
2004/0117831 A1 6/2004 Ellis et al.
2004/0117839 A1 6/2004 Watson et al.
2004/0128319 A1 7/2004 Davis et al.
2004/0139158 A1 7/2004 Datta
2004/0139482 A1 7/2004 Hale
2004/0148638 A1 7/2004 Weisman et al.
2004/0152517 A1 8/2004 Haedisty
2004/0152519 A1 8/2004 Wang
2004/0158855 A1 8/2004 Gu et al.
2004/0162124 A1 8/2004 Barton et al.
2004/0166873 A1 8/2004 Simic
2004/0176162 A1 9/2004 Rothschild
2004/0178923 A1 9/2004 Kuang
2004/0183824 A1 9/2004 Benson
2004/0185881 A1 9/2004 Lee
2004/0190779 A1 9/2004 Sarachik et al.
2004/0198495 A1 10/2004 Cisneros et al.
2004/0201626 A1 10/2004 Lavoie
2004/0203667 A1 10/2004 Shroder
2004/0203898 A1 10/2004 Bodin et al.
2004/0210507 A1 10/2004 Asher et al.
2004/0215756 A1 10/2004 VanAntwerp
2004/0216161 A1 10/2004 Barone, Jr. et al.
2004/0216171 A1 10/2004 Barone, Jr. et al.
2004/0224750 A1 11/2004 Ai-Ziyoud
2004/0242321 A1 12/2004 Overton
2004/0266513 A1 12/2004 Odom
2005/0005303 A1 1/2005 Barone, Jr. et al.
2005/0021942 A1 1/2005 Diehl et al.
2005/0026699 A1 2/2005 Kinzer et al.
2005/0028208 A1 2/2005 Ellis
2005/0043094 A1 2/2005 Nguyen et al.
2005/0076371 A1 4/2005 Nakamura
2005/0077997 A1 4/2005 Landram
2005/0060219 A1 5/2005 Ditering et al.
2005/0097599 A1 5/2005 Potnick et al.
2005/0101309 A1 5/2005 Croome
2005/0113164 A1 5/2005 Buecheler et al.
2005/0003878 A1 6/2005 Updike
2005/0131984 A1 6/2005 Hofmann et al.
2005/0138668 A1 6/2005 Gray et al.
2005/0144102 A1 6/2005 Johnson
2005/0155083 A1 7/2005 Oh
2005/0177861 A1 8/2005 Ma et al.
2005/0210526 A1 9/2005 Levy et al.
2005/0216838 A1 9/2005 Graham
2005/0235043 A1 10/2005 Teodosiu et al.
2005/0239551 A1 10/2005 Griswold
2005/0255901 A1 11/2005 Kreutzer
2005/0256895 A1 11/2005 Dussault
2005/0266869 A1 12/2005 Jung
2005/0267969 A1 12/2005 Poikselka et al.
2005/0273804 A1 12/2005 Preisman
2005/0283800 A1 12/2005 Ellis et al.
2005/0288080 A1 12/2005 Lockton et al.
2005/0288101 A1 12/2005 Lockton et al.
2005/0288812 A1 12/2005 Cheng
2006/0020700 A1 1/2006 Qiu
2006/0025070 A1 2/2006 Kim et al.
2006/0046810 A1 3/2006 Tabata
2006/0047772 A1 3/2006 Crutcher
2006/0053390 A1 3/2006 Gariepy-Viles
2006/0058103 A1 3/2006 Danieli
2006/0059161 A1 3/2006 Millett et al.
2006/0063590 A1 3/2006 Abassi et al.
2006/0082068 A1 4/2006 Patchen
2006/0087585 A1 4/2006 Seo
2006/0089199 A1 4/2006 Jordan et al.
2006/0094409 A1* 5/2006 Inselberg G06Q 30/02 455/414.1
2006/0111168 A1 5/2006 Nguyen
2006/0135253 A1 6/2006 George et al.
2006/0148569 A1 7/2006 Beck
2006/0156371 A1 7/2006 Maetz et al.
2006/0174307 A1 8/2006 Hwang et al.
2006/0183547 A1 8/2006 Mc Monigle
2006/0183548 A1 8/2006 Morris et al.
2006/0190654 A1 8/2006 Joy
2006/0205483 A1 9/2006 Meyer et al.
2006/0205509 A1 9/2006 Hirota
2006/0205510 A1 9/2006 Lauper
2006/0217198 A1 9/2006 Johnson
2006/0236352 A1 10/2006 Scott, III

(56) **References Cited**

U.S. PATENT DOCUMENTS

2006/0248553 A1 11/2006 Mikkelson et al.
2006/0248564 A1 11/2006 Zinevitch
2006/0256865 A1 11/2006 Westerman
2006/0256868 A1 11/2006 Westerman
2006/0269120 A1 11/2006 Nehmadi et al.
2006/0285586 A1 12/2006 Westerman
2007/0004516 A1 1/2007 Jordan et al.
2007/0013547 A1 1/2007 Boaz
2007/0019826 A1 1/2007 Horbach et al.
2007/0028272 A1 2/2007 Lockton
2007/0037623 A1 2/2007 Romik
2007/0054695 A1 3/2007 Huske et al.
2007/0078009 A1 4/2007 Lockton et al.
2007/0083920 A1 4/2007 Mizoguchi et al.
2007/0086465 A1 4/2007 Paila et al.
2007/0087832 A1 4/2007 Abbott
2007/0093296 A1 4/2007 Asher
2007/0101358 A1 5/2007 Ambady
2007/0106721 A1 5/2007 Schloter
2007/0107010 A1 5/2007 Jolna et al.
2007/0129144 A1 6/2007 Katz
2007/0147870 A1 7/2007 Nagashima et al.
2007/0162328 A1 7/2007 Reich
2007/0183744 A1 8/2007 Koizumi
2007/0197247 A1* 8/2007 Inselberg G06Q 30/02 455/517
2007/0210908 A1 9/2007 Putterman et al.
2007/0219856 A1 9/2007 Ahmad-Taylor
2007/0222652 A1 9/2007 Cattone et al.
2007/0226062 A1 9/2007 Hughes et al.
2007/0238525 A1 10/2007 Suomela
2007/0243936 A1 10/2007 Binenstock et al.
2007/0244570 A1 10/2007 Speiser et al.
2007/0244585 A1 10/2007 Speiser et al.
2007/0244749 A1 10/2007 Speiser et al.
2007/0265089 A1 11/2007 Robarts
2007/0294410 A1 12/2007 Pandya
2008/0005037 A1 1/2008 Hammad
2008/0013927 A1 1/2008 Kelly et al.
2008/0051201 A1 2/2008 Lore
2008/0066129 A1 3/2008 Katcher et al.
2008/0076497 A1 3/2008 Kiskis et al.
2008/0104630 A1 5/2008 Bruce
2008/0146337 A1 6/2008 Halonen
2008/0169605 A1 7/2008 Shuster et al.
2008/0222672 A1 9/2008 Piesing
2008/0240681 A1 10/2008 Fukushima
2008/0248865 A1 10/2008 Tedesco
2008/0270288 A1 10/2008 Butterly et al.
2008/0288600 A1 11/2008 Clark
2009/0011781 A1 1/2009 Merrill et al.
2009/0094632 A1 4/2009 Newman et al.
2009/0103892 A1 4/2009 Hirayama
2009/0186676 A1 7/2009 Amaitis et al.
2009/0163271 A1 9/2009 George et al.
2009/0228351 A1 9/2009 Rijsenbrij
2009/0234674 A1 9/2009 Wurster
2009/0264188 A1 10/2009 Soukup
2009/0271512 A1 10/2009 Jorgensen
2010/0099421 A1 4/2010 Patel et al.
2010/0099471 A1 4/2010 Feeney et al.
2010/0107194 A1 4/2010 McKissick et al.
2010/0120503 A1 5/2010 Hoffman et al.
2010/0137057 A1 6/2010 Fleming
2010/0203936 A1 8/2010 Levy
2010/0279764 A1 11/2010 Allen et al.
2010/0296511 A1 11/2010 Prodan
2011/0016224 A1 1/2011 Riley
2011/0053681 A1 3/2011 Goldman
2011/0065490 A1 3/2011 Lutnick
2011/0081958 A1 4/2011 Herman
2011/0116461 A1 5/2011 Holt
2011/0130197 A1 6/2011 Bythar et al.
2011/0227287 A1 9/2011 Reabe
2011/0269548 A1 11/2011 Barclay et al.
2011/0306428 A1 12/2011 Lockton et al.
2012/0058808 A1 3/2012 Lockton
2012/0115585 A1 5/2012 Goldman
2012/0157178 A1 6/2012 Lockton
2012/0264496 A1 10/2012 Behrman et al.
2012/0282995 A1 11/2012 Allen et al.
2012/0295686 A1 11/2012 Lockton
2013/0005453 A1 1/2013 Nguyen et al.
2013/0072271 A1 3/2013 Lockton et al.
2013/0079081 A1 3/2013 Lockton et al.
2013/0079092 A1 3/2013 Lockton et al.
2013/0079093 A1 3/2013 Lockton et al.
2013/0079135 A1 3/2013 Lockton et al.
2013/0079150 A1 3/2013 Lockton et al.
2013/0079151 A1 3/2013 Lockton et al.
2013/0196774 A1 8/2013 Lockton et al.
2013/0225285 A1 8/2013 Lockton
2013/0225299 A1 8/2013 Lockton
2014/0031134 A1 1/2014 Lockton et al.
2014/0100011 A1 4/2014 Gingher
2014/0106832 A1 4/2014 Lockton et al.
2014/0128139 A1 5/2014 Shuster et al.
2014/0155130 A1 6/2014 Lockton et al.
2014/0155134 A1 6/2014 Lockton
2014/0206446 A1 7/2014 Lockton et al.
2014/0237025 A1 8/2014 Huske et al.
2014/0248952 A1 9/2014 Cibula et al.
2014/0256432 A1 9/2014 Lockton et al.
2014/0279439 A1 9/2014 Brown
2014/0287832 A1 9/2014 Lockton et al.
2014/0335961 A1 11/2014 Lockton et al.
2014/0335962 A1 11/2014 Lockton et al.
2014/0378212 A1 12/2014 Sims
2015/0011310 A1 1/2015 Lockton et al.
2015/0067732 A1 3/2015 Howe et al.
2015/0148130 A1 5/2015 Cibula et al.
2015/0238839 A1 8/2015 Lockton
2015/0238873 A1 8/2015 Arnone et al.
2015/0258452 A1 9/2015 Lockton et al.
2015/0356831 A1 12/2015 Osibodu
2016/0023116 A1 1/2016 Wire
2016/0045824 A1 2/2016 Lockton et al.
2016/0049049 A1 2/2016 Lockton
2016/0054872 A1 2/2016 Cibula et al.
2016/0082357 A1 3/2016 Lockton
2016/0121208 A1 5/2016 Lockton et al.
2016/0134947 A1 5/2016 Huske et al.
2016/0217653 A1 7/2016 Meyer
2016/0271501 A1 9/2016 Balsbaugh
2016/0361647 A1 12/2016 Lockton et al.
2016/0375362 A1 12/2016 Lockton et al.
2017/0036110 A1 2/2017 Lockton et al.
2017/0036117 A1 2/2017 Lockton et al.
2017/0043259 A1 2/2017 Lockton et al.
2017/0053498 A1 2/2017 Lockton
2017/0065891 A1 3/2017 Lockton et al.
2017/0098348 A1 4/2017 Odom
2017/0103615 A1 4/2017 Theodospoulos
2017/0128840 A1 5/2017 Croci
2017/0221314 A1 8/2017 Lockton
2017/0225071 A1 8/2017 Lockton et al.
2017/0225072 A1 8/2017 Lockton et al.
2017/0232340 A1 8/2017 Lockton
2017/0243438 A1 8/2017 Merati
2017/0249801 A1 8/2017 Malek
2017/0252649 A1 9/2017 Lockton et al.
2017/0259173 A1 9/2017 Lockton et al.
2017/0264961 A1 9/2017 Lockton
2017/0282067 A1 10/2017 Lockton et al.
2017/0296916 A1 10/2017 Lockton et al.
2017/0304726 A1 10/2017 Lockton et al.
2017/0345260 A1 11/2017 Strause
2018/0025586 A1 1/2018 Lockton
2018/0071637 A1 3/2018 Baazov
2018/0104582 A1 4/2018 Lockton et al.
2018/0104596 A1 4/2018 Lockton et al.
2018/0117464 A1 5/2018 Lockton et al.
2018/0140955 A1 5/2018 Lockton et al.
2018/0154255 A1 6/2018 Lockton

(56) **References Cited**

U.S. PATENT DOCUMENTS

2018/0169523	A1	6/2018	Lockton et al.
2018/0190077	A1	7/2018	Hall
2018/0236359	A1	8/2018	Lockton et al.
2018/0243652	A1	8/2018	Lockton et al.
2018/0264360	A1	9/2018	Lockton et al.
2018/0300988	A1	10/2018	Lockton
2018/0318710	A1	11/2018	Lockton et al.
2019/0054375	A1	2/2019	Lockton et al.
2019/0060750	A1	2/2019	Lockton et al.

FOREIGN PATENT DOCUMENTS

CA	2279069		7/1999
CA	2287617		10/1999
EP	0649102	A3	6/1996
GB	2364485		1/2002
JP	11-46356		2/1999
JP	11-239183		8/1999
JP	2000-165840		6/2000
JP	2000-217094		8/2000
JP	2000-358255		12/2000
JP	2001-28743		1/2001
JP	2000-209563		7/2008
NZ	330242		10/1989
WO	01/039506	A2	5/2001
WO	01/65743	A1	9/2001
WO	02/03698	A1	10/2002
WO	2005064506	A1	7/2005
WO	2006004855		1/2006
WO	2006004856		1/2006
WO	2007002284		1/2007
WO	2007016575		2/2007
WO	2007041667		4/2007
WO	2008027811	A2	3/2008
WO	2008115858	A1	9/2008

OTHER PUBLICATIONS

'Ark 4.0 Standard Edition, Technical Overview' www.twowaytv.com/version4/technologies/tech_ark_professionals.asp.

"Understanding the Interactivity Between Television and Mobile commerce", Robert Davis and David Yung, Communications of the ACM, Jul. 2005, vol. 48, No. 7, pp. 103-105.

"Re: Multicast Based Voting System" www.ripe.net/ripe/maillists/archives/mbone-eu-op/1997/msg00100html.

"IST and Sportal.com: Live on the Internet Sep. 14, 2004 by Clare Spoonheim", www.isk.co.usk/NEWS/dotcom/ist_sportal.html.

"Modeling User Behavior in Networked Games byTristan Henderson and Saleem Bhatti", www.woodworm.cs.uml.edu/rprice/ep/henderson.

"SMS Based Voting and Survey System for Meetings", www.abbit.be/technology/SMSSURVEY.html.

"PurpleAce Launches 3GSM Ringtone Competition", www.wirelessdevnet.com/news/2005/jan/31/news6html.

"On the Perfomance of Protocols for collecting Responses over a Multiple-Access Channel", Mostafa H. Ammar and George N. Rouskas, IEEE INCOMFORM '91, pp. 1490-1499, vol. 3, IEEE, New York, NY.

Merriam-Webster, "Game" definition, <http://www.merriam-webster.com/dictionary/agme.pg.1.

Ducheneaut et al., "The Social Side of Gaming: A Study of Interaction Patterns in a Massively Multiplayer Online Game", Palo Alto Research Center, Nov. 2004, vol. 6, Issue 4, pp. 360-369.

http://help.yahoo.com/help/us/tourn/tourn-03.html.

Pinnacle,"The basics of reverse line movement," Jan. 19, 2018, Retrieved on Jan. 22, 2020 , http://www.pinnacle.com/en/betting-articles educational/basics-of-reverse-line-movement/QAH26XGGQQS7M3GD.

Gambling Commission,"Virtual currencies, eSports and social casino gaming-position paper," Mar. 2017, Retrieved on Jan. 22, 2020, http://gamblingcomission.gov.uk/PDF/Virtual-currencies-eSports-and -social-casino-gaming.pdf.

Sipko et al., "Machine learning for the prediction of professional tennis matches," In: MEng computing-final year project, Imperial College London, Jun. 15, 2015, http://www.doc.ic.ac.uk/teaching/distinguished-projects/2015/m.sipko.pdf.

Winview Game Producer, "Live TV Sports Play Along App WinView Games Announces Sponsorship With PepsiCo To Start This Holiday Season," In Winview Games. Dec. 21, 2016, Retrieved on Jan. 21, 2020 from , http://www. winviewgames./press-release/live-tv-sports-play-along-app-winview-games-announces-sponsorship-pepsico-start-holiday-season/.

The International Search Report and The Written Opinion for the PCT/US2019/054859 dated Feb. 4, 2020.

The International Preliminary Report dated Apr. 22, 2021 for the application PCT/US2019/054859.

* cited by examiner

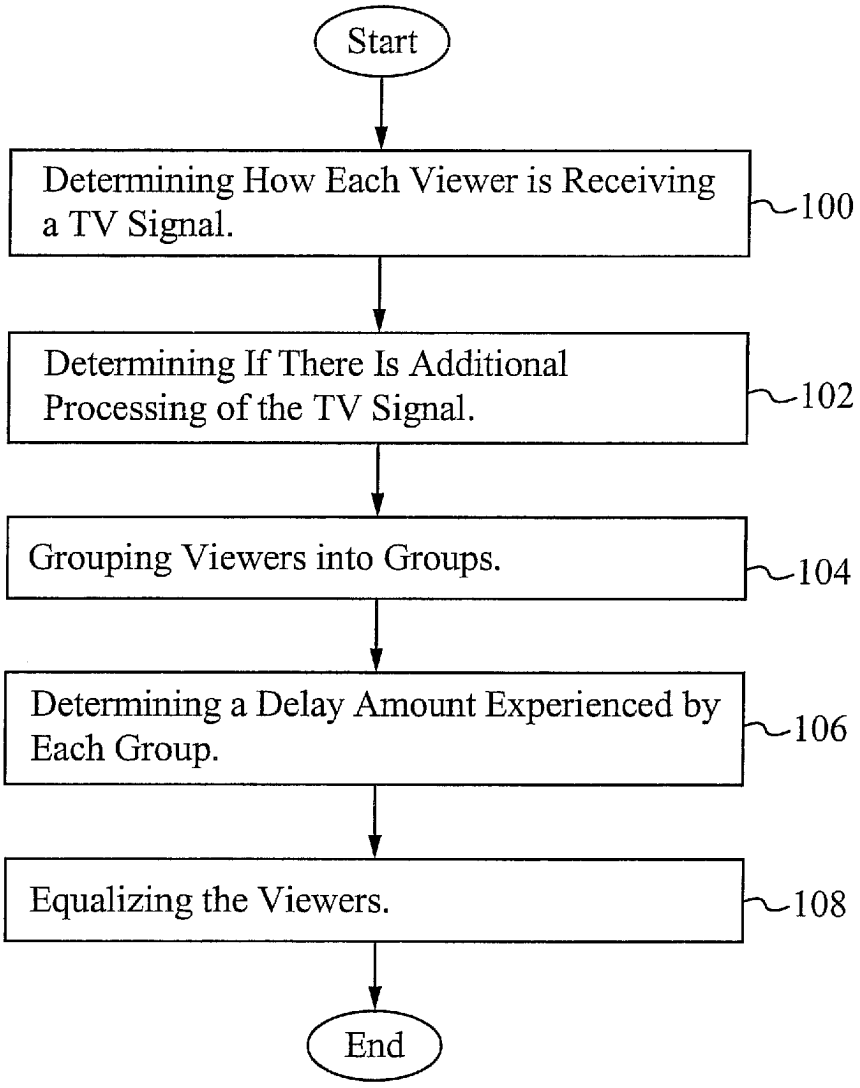

Start
Determining How Each Viewer is Receiving a TV Signal.
100
Determining If There Is Additional Processing of the TV Signal.
102
Grouping Viewers into Groups.
104
Determining a Delay Amount Experienced by Each Group.
106
Equalizing the Viewers.
108
End

Fig. 1

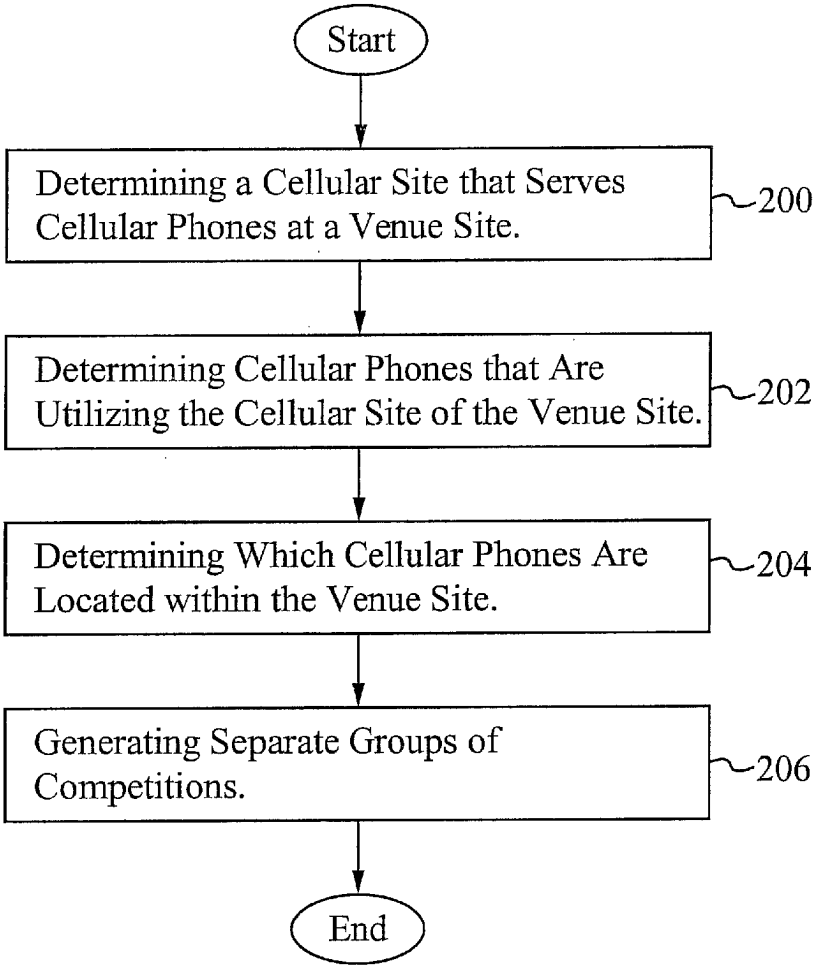

Start
Determining a Cellular Site that Serves Cellular Phones at a Venue Site.
200
Determining Cellular Phones that Are Utilizing the Cellular Site of the Venue Site.
202
Determining Which Cellular Phones Are Located within the Venue Site.
204
Generating Separate Groups of Competitions.
206
End

Fig. 2

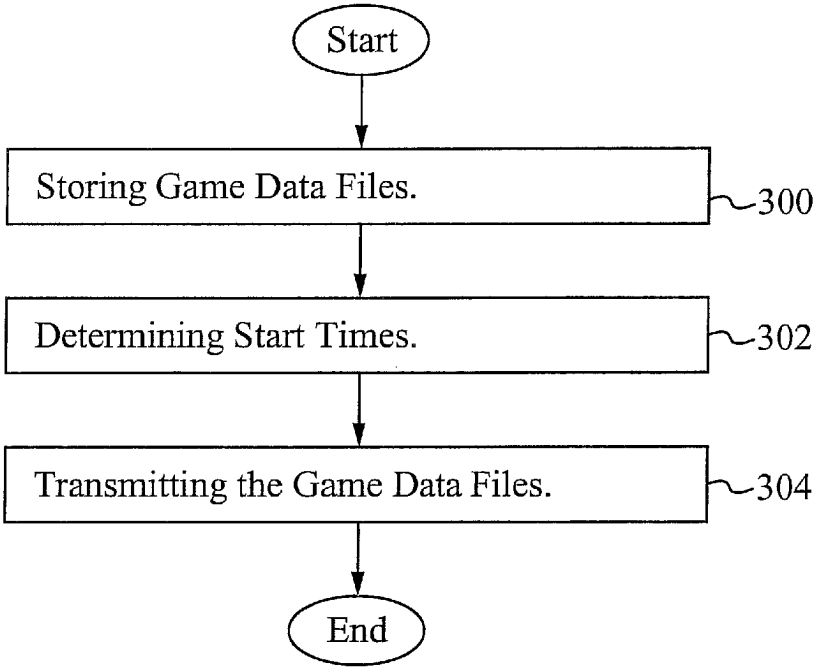

Start
Storing Game Data Files.
300
Determining Start Times.
302
Transmitting the Game Data Files.
304
End

Fig. 3

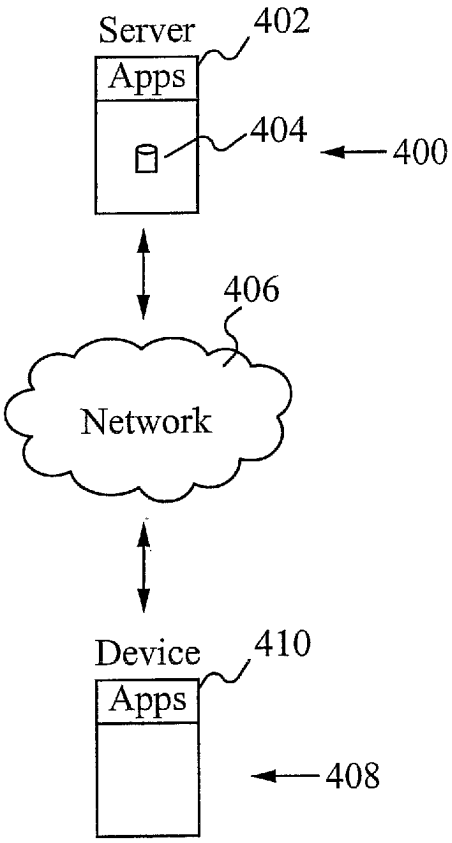


Fig. 4

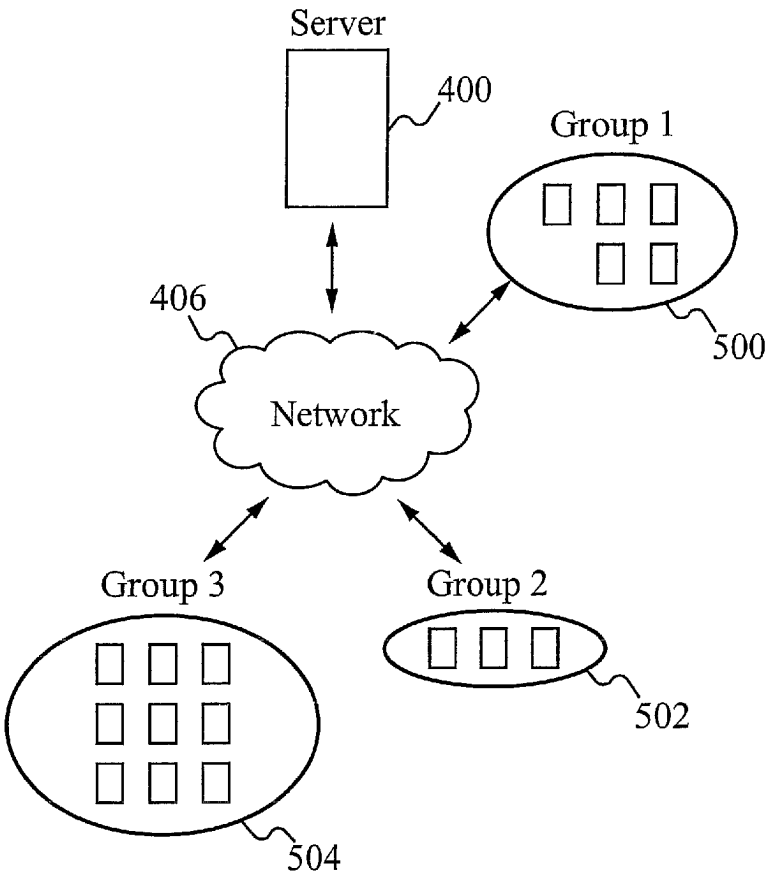


Fig. 5

METHODOLOGY FOR EQUALIZING SYSTEMIC LATENCIES IN TELEVISION RECEPTION IN CONNECTION WITH GAMES OF SKILL PLAYED IN CONNECTION WITH LIVE TELEVISION PROGRAMMING

RELATED APPLICATION(S)

This Patent Application is a continuation application of co-pending U.S. patent application Ser. No. 16/177,118, filed Oct. 31, 2018, titled "A METHODOLOGY FOR EQUALIZING SYSTEMIC LATENCIES IN TELEVISION RECEPTION IN CONNECTION WITH GAMES OF SKILL PLAYED IN CONNECTION WITH LIVE TELEVISION PROGRAMMING", which is a continuation application of U.S. patent application Ser. No. 15/900,438, filed Feb. 20, 2018, titled "A METHODOLOGY FOR EQUALIZING SYSTEMIC LATENCIES IN TELEVISION RECEPTION IN CONNECTION WITH GAMES OF SKILL PLAYED IN CONNECTION WITH LIVE TELEVISION PROGRAMMING", which is a continuation of U.S. patent application Ser. No. 15/648,101, filed Jul. 12, 2017, titled "A METHODOLOGY FOR EQUALIZING SYSTEMIC LATENCIES IN TELEVISION RECEPTION IN CONNECTION WITH GAMES OF SKILL PLAYED IN CONNECTION WITH LIVE TELEVISION PROGRAMMING," which is a continuation application of U.S. patent application Ser. No. 15/263,186, filed Sep. 12, 2016, titled, "A METHODOLOGY FOR EQUALIZING SYSTEMIC LATENCIES IN TELEVISION RECEPTION IN CONNECTION WITH GAMES OF SKILL PLAYED IN CONNECTION WITH LIVE TELEVISION PROGRAMMING," which is a divisional application of U.S. patent application Ser. No. 14/172,571, filed Feb. 4, 2014, titled, "A METHODOLOGY FOR EQUALIZING SYSTEMIC LATENCIES IN TELEVISION RECEPTION IN CONNECTION WITH GAMES OF SKILL PLAYED IN CONNECTION WITH LIVE TELEVISION PROGRAMMING," which is a continuation of U.S. patent application Ser. No. 13/681,172, filed Nov. 19, 2012, titled, "A METHODOLOGY FOR EQUALIZING SYSTEMIC LATENCIES IN TELEVISION RECEPTION IN CONNECTION WITH GAMES OF SKILL PLAYED IN CONNECTION WITH LIVE TELEVISION PROGRAMMING," which is a divisional of U.S. patent application Ser. No. 13/403,845, filed Feb. 23, 2012, titled, "A METHODOLOGY FOR EQUALIZING SYSTEMIC LATENCIES IN TELEVISION RECEPTION IN CONNECTION WITH GAMES OF SKILL PLAYED IN CONNECTION WITH LIVE TELEVISION PROGRAMMING," which is a continuation of U.S. patent application Ser. No. 11/786,992, filed Apr. 12, 2007, (now U.S. Pat. No. 8,149,530), titled, "A METHODOLOGY FOR EQUALIZING SYSTEMIC LATENCIES IN TELEVISION RECEPTION IN CONNECTION WITH GAMES OF SKILL PLAYED IN CONNECTION WITH LIVE TELEVISION PROGRAMMING," which claims priority under 35 U.S.C. § 119(e) of the co-owned United States Provisional Patent Application No. 60/791,793, filed Apr. 12, 2006, and titled "A METHODOLOGY FOR EQUALIZING SYSTEMIC LATENCIES IN TELEVISION RECEPTION IN CONNECTION WITH GAMES OF SKILL PLAYED IN CONNECTION WITH LIVE TELEVISION PROGRAMMING" which are also all hereby incorporated by reference in their entireties.

FIELD OF THE INVENTION

The present invention relates to the field of distributed gaming. More specifically, the present invention relates to the field of distributed gaming utilizing a mobile device.

BACKGROUND OF THE INVENTION

In the United States alone there are over 170 million registered cellular phones. With the expiration of the U.S. Pat. No. 4,592,546 to Fascenda and Lockton, companies are able to now use the cellular phone and other mobile communication devices utilizing a multicast network to control television viewers in games of skill based upon predicting, for example, what the quarterback may call on the next play within a football game. Both prime time and programs syndicated on a market-by-market basis lend themselves to games of skill. In addition, games of skill with a common start time can be conducted simultaneously among cellular phone owners, based on classic card, dice, trivia, and other games. In order to avoid the anti-gaming laws in the various states, the winners must be determined by the relative skill, experience and practice of the player in each discrete game.

U.S. Pat. No. 5,813,913 ('913) to Berner and Lockton provides for a central computing system which includes a means of grouping participants having similar skill levels together in simultaneous, but separate, levels of competition playing an identical game. The relative performances are communicated to only those participants competing at the same skill level. The '913 patent also provides for a wireless receiving device to permanently store the specific skill level for each participant for each type of common event such as those based on televised sports or game shows. The '913 patent provides for a telephonic link at the completion of the game to collect information and update the skill level of the participants of a particular game. When a person achieves sufficient points or meets other objective criteria to graduate into another skill level, a method is provided for accomplishing this in the central computer and then transmitting an alert to the participant notifying them of their promotion. The '913 patent describes awarding prizes and providing recognition for the members of each discreet skill level in a common game. All users, no matter what level they are on, receive the same number of questions and thus the possibility of earning the same number of points. Thus direct comparisons between users at different levels, although not encouraged are possible. Such comparisons between players of disparate skills can lead to user discouragement.

Games of skill and chance have an intrinsic excitement and entertainment value. Any game is greatly enhanced by a participant's ability to know how their performance compares in relation to other participants and/or to historical performance for the game throughout the contest. As with any game of skill, competition among friends, or with strangers of similar experience, or the ability at ones option, sometimes for an extra consideration, to compete in a separate team or individual contest, offers the opportunity of increased enjoyment and prizes.

Games of skill that rely on participation by watching an event on a television have potential latency issues since television signal reception is not synchronized nationwide. For example, a participant in Texas using a satellite dish network may experience a 3 second delay compared to an individual in California using a cable network. Also, there are delays between individuals attending a game live and those watching the game live on television. Furthermore, for taped programs, both those shown to viewers in time zones

or those syndicated on a market-by-market basis, there are potential delay issues as experienced with the live broadcasts in addition to other possible differences in timing of the broadcasts. Therefore, to maintain user enjoyment and fairness for all participants, these delays must be neutralized.

SUMMARY OF THE INVENTION

A method of and system for handling latency issues encountered in producing real-time entertainment such as games of skill synchronized with live or taped televised events is described herein. There are multiple situations that are dealt with regarding latencies in receiving a television signal with respect to real-time entertainment based on the unfolding games played along with the telecasts. Systemic delays, arbitrarily imposed delays of a broadcast signal and variances in the precise broadcast times of taped television programs have to be equalized so as to provide fair entertainment.

In one aspect, a method of equalizing effects of latency differences in a game of skill comprises grouping participants into a set of cohorts viewing a telecast delivered by identical transmission and reception systems, determining an amount of delay for each cohort in the set of cohorts and substantially equalizing the set of cohorts through adjustment of the amount of delay. The method further comprises determining how each participant receives a television signal. How each participant receives a television signal is selected from the group consisting of an over the air broadcast, a cable system and a satellite system. The participants are grouped based on how the participants receive a television signal. The method further comprises determining if there is additional processing of a television signal in a reception location. The additional processing occurs within a participant's location selected from the group consisting of a public place, a home, an office and a bar. Since each cable system may impose different delay at their head-ends, the specific cable provider is identified. Determining the amount of delay comprises one or more of requiring the participants to answer questions related to their television system service, requiring the participants to mark on a game playing client device, a precise time that a predetermined audio or visual event is viewed on a television program, utilizing a GPS function in a cellular phone to determine a physical location of each of the participants, utilizing an employee of a game producer who is a member of each cohort in the set of cohorts to determine the amount of delay, inserting an artifact in the telecast in which the participants respond to, and establishing the amount of delay through an automated system which samples an audio or video track of a satellite, cable or over the air broadcast television signal, linked to a game server, to provide information related to a precise arrival of an underlying television picture. An average is taken when requiring participants to mark the precise time the predetermined audio or visual event is viewed on the television program. Equalizing the set of cohorts comprises at least one of time stamping the amount of delay on a game lock out signal, imposing the amount of delay on an entire game data stream and sending game control data to the participant cohorts at the same time where client software delays presentation of game data based on a precise time of reception of the telecast by the group.

In another aspect, a method of preventing a first set of participants at a live event from having an advantage over a second set of participants watching the live event on television comprises determining a cellular site that serves a set of cellular phones at a venue site, determining the set of cellular phones that are utilizing the cellular site of the venue site, determining a subset of cellular phones within the set of cellular phones that are located within the venue site and generating separate groups of competitions based on the subset of cellular phones within the set of cellular phones that are located within the venue site. A first group within the separate groups of competitions includes only the first set of participants and a second group within the separate groups of competitions includes only the second set of participants. An application on a server determines the cellular site, the set of cellular phones utilizing the cellular site and the subset of cellular phones located within the venue site. An application on each cellular phone within the subset of cellular phones determines if the cellular phone is located within the venue site.

In another aspect, a method of equalizing effects of latency issues with a taped television broadcast comprises storing a set of data files on a server, determining one or more start times and transmitting the set of files from the server to each mobile device at a transmission time corresponding to an appropriate start time for the mobile device. An application starts using the set of files at the one or more start times. The set of data files are game data files. Determining the one or more start times includes at least one of utilizing an employee of a game provider based on visual observation of a telecast, utilizing at least one of an audio and video recognition system with online access to the broadcast for each separate market which provides real-time tracking of the broadcast to the server, adding at least one of an audio and video event in the television broadcast which is recognizable at a starting point, designating at least one of the audio and video event in the television broadcast which is recognizable as the starting point, utilizing an audio signal, inserted within the broadcast recognizable by an audio receiver of the mobile device, and using a vertical blanking interval.

In yet another aspect, a system for equalizing effects of latency issues for a game of skill comprises a mobile device and a server coupled to the mobile device wherein the server sends a lockout signal at an appropriate time based on a measured amount of delay to prevent a user from submitting a response after they see the outcome. The mobile device is within a group of mobile devices. The server determines which group the mobile device is in. The server stores game control data and transmits the game control data to the mobile device. The game control data includes delay information for implementing the lockout signal. The server contains a location determination application for determining the location of the mobile device. The mobile device contains a location determination application for determining the location of the mobile device. Variances in delays in receiving the television signal determine delays in transmitting applicable data files within a television signal reception path

In another aspect, a device for equalizing effects of latency issues for a game of skill comprises a storage device and a set of applications contained within the storage device for sending a lockout signal at an appropriate time based on a measured amount of delay to prevent a user from submitting a response after they see the outcome. The set of applications determines which group mobile devices coupled to the device are in. The device stores game control data and transfers the game control data to mobile devices. The game control data includes delay information for implementing the lockout signal. The set of applications includes a location application for determining the location of mobile

devices. The amount of delay accounts for delays within a television signal reception path.

A network of devices comprises a plurality of mobile devices and a server coupled to the mobile devices wherein the server groups the plurality of mobile devices into a set of cohorts and wherein the server sends a lockout signal at an appropriate time based on an amount of delay to prevent users from submitting a response after they see the outcome. Each cohort within the set of cohorts is based on a signal reception path. The signal reception path is selected from the group consisting of an over the air network, a cable network and a satellite network. The server stores game control data and transfers the game control data to each mobile device within the plurality of mobile devices. The game control data is specific for each cohort within the set of cohorts. The game control data includes delay information for equalizing the lockout signal. The amount of delay accounts for delays within a television signal reception path.

BRIEF DESCRIPTION OF THE DRAWINGS

FIG. **1** illustrates a flowchart of a process of preventing latency issues from giving an advantage to some participants.

FIG. **2** illustrates a flowchart of a process of preventing participants at a live event from having an unfair advantage over participants watching on television.

FIG. **3** illustrates a flowchart of a process of handling latency issues for taped programs.

FIG. **4** illustrates a graphical representation of an embodiment of the present invention.

FIG. **5** illustrates a graphical representation of a network of devices of the present invention.

DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENT

U.S. Provisional Patent Application No. 60/692,356, filed Jun. 20, 2005, and entitled "SYSTEMS AND METHODOLOGIES ENABLING A CELL PHONE BASED SUBSCRIPTION SERVICE OFFERING A VARIETY OF SCHEDULED GAMES IN CONNECTION WITH LIVE TELEVISION PROGRAMMING," is incorporated by reference herein.

The present invention addresses three separate classes of latency issues for the length of time it takes a television signal to reach a viewer in producing real-time entertainment such as games of skill synchronized with television programming. The latency issues are: 1) systemic propagation delays in the delivery of a television signal to a receiver, 2) arbitrarily imposed delays of a broadcast television signal and 3) variances in precise broadcast times of segments of taped television programs between local and national commercials, sold through syndication to individual television stations.

Systemic Propagation Delays

There are specific challenges facing a service comprised of games or other entertainment played by remote participants utilizing cellular phones or the Internet, in connection with a live or taped telecast. Examples are live baseball, basketball and football games, taped game shows such as Wheel of Fortune™ and Jeopardy™ or other television programming such as predicting the winners of the Oscars. In a game of skill, for example, fair competition necessitates that a fast paced game, based on the unfolding television action has a level playing field for all participants regardless of how they receive their television signal. Propagation delays result from, among other things, the number of satellite hops required to deliver the signal, the method of processing and rebroadcasting the signal after it is received by cable systems head ends or an over the air broadcast television station, and whether or not the signal is further processed for high definition television. Furthermore, digital television recording systems (DVRs) such as TiVo™ are also able to generate delays in the viewing of the picture after receipt via satellite or cable. These delays are able to result in a difference between the first signal received and the last received of more than several seconds.

People have an unsatisfactory experience and/or others are able to gain a potential competitive advantage from the variances in the exact time one viewer sees an event on their television versus another competitor who receives their television signal through a different delivery path. In the U.S., the 120 million television homes receive their signal either through an over the air broadcast, cable system or via satellite delivery. Each delivery system can impose propagation delays of various time lengths. If the delay between the time a viewer with the least amount of delay and the person receiving the signal with the greatest amount of delay exceeds several seconds, some inequalities in game experience and play are able to result.

One example is a game is based upon a football telecast, wherein competitors predict the play that the coaches and/or quarterback call prior to the snap of the ball. The competitor's prediction is based among other things on their observation of the down, distance and the offensive and defensive formations on the field and tendencies of the teams in these situations. Such a game utilizes a "lock out" signal, as described in the U.S. Pat. No. 4,592,546 to Fascenda, entitled "Game of Skill Playable by Remote Participants in Conjunction with a Live Event," which is incorporated by reference herein, to prohibit the entry of predictions after the competitor sees the play begin to unfold, at the snap of the ball. The time stamped "lock out" signal is generated by a game producer also viewing the same telecast from a different location. If the game producer is viewing a television signal several seconds before some competitors and generating a time stamp based on that event, an advantage is able to result if the difference in the time stamp and the receipt of the "lock out" signal is more than several seconds earlier in relation to another competitor's television signal which is delayed. During this period of time, for example, on a first or second down situation, a competitor receives the "lock out" just as the quarterback receives the snap and the corresponding television signal at the same time as the game producer while another competitor with a delayed television signal, receives a "lock out" signal while the quarterback is approaching the line of scrimmage. In another example, if the game producer is viewing a signal after a viewer, a competitor might see the quarterback start to drop back into a "shot gun" formation, making the likelihood of a pass considerably higher. This latter player might have time to change his prediction from, "run" to "pass" before receiving a "lock out" generated at the snap of the ball. A person consistently receiving a "lock out" later than another competitor might, through the course of the game, gain some competitive advantage.

While it is not clear that sufficient enough competitive advantage is gained between a competitor receiving his "lock out" signal precisely at the snap of the ball and one who is locked out a few seconds prior to the snap of the ball, this discrepancy could present the appearance of a playing field that is not level, and one of the primary benefits of the

system addressed in the present invention is to ensure the competitors feel they are on equal footing.

The present invention solves the above described issue through a system and method to effectively equalize systemic propagation delay variances to a required level dictated by the demands and rules of a particular game, so that a material competitive advantage is not obtained and the user experience is optimized for all players.

The solution first relies on the determination of how each viewer is receiving their television signal (e.g. via an over the air broadcast in a metropolitan area, via a particular cable system or a particular satellite system). All subscribers to a particular service provider or who are receiving an over the air broadcast in a specific metropolitan area will receive the signal at their location at the same time. It is also able to be determined if there is further processing of the signal within the homes, office, bar and others, which could further increase the total length of the propagation delay. Examples would be the use of a DVR, such as TiVo™. The present invention relies on a variety of methodologies which are able to be utilized to determine the time difference between the reception of the television picture being utilized by the central game production facility where "lock out" signals are generated and each separate group of viewers around the country or around the world.

For this system, the total viewing population for a telecast is divided into segments or blocks of viewers referred to as "cohorts." For example, the 2 million inhabitants of the San Francisco Bay Area would be divided into approximately 1 over the air broadcast, 3 satellite independent providers and several cable "head ends" or central broadcast points serving a "cohort." This information would be gathered at a central game server, and all players registered to play in a particular contest would be assigned to a specific cohort of viewers.

The following are some methodologies for determining the delays experienced by various cohorts which are able to be used in combination or separately.

In one methodology, upon joining the service and prior to initial game play, subscribers and competitors are required to identify the method by which they receive their television signal and identify the cable or satellite service provider and answer questions relative to whether or not they subscribe to an analog or digital high definition service or utilize a DVR. This information is able to be verified by sending questions to their cellular phones concerning commercials, station breaks and the precise time they are viewed or utilizing other information only seen by members of that cohort.

In another methodology, a routine is established upon entry into the game where the individual viewer is asked to mark the precise time a predetermined audio or visual event in the television program occurs, such as the initial kickoff, which would establish the deviation of their receipt of their television picture from the television signal utilized by the game producers. While some viewers might attempt to cheat by delaying their input, the earliest entries from the cohorts in this group would be averaged to establish the accurate delta between the receipt of the telecast by the production crew and those in each discrete sub group of viewers.

In another methodology, the GPS function in the cellular phone is used to determine the physical location of a viewer which is matched to a database of cable lead ends or over the air broadcast stations available to a consumer in that precise location.

In another methodology, employees of the game producer who are members of the subgroups which constitute the competitors/viewers, e.g. a subscriber to Comcast Cable in San Francisco, are utilized by the game service provider. These individuals would provide the current propagation delay information sent to the game server utilizing their identification of a recognizable event they observe on their television set, such as the initial snap of the ball.

In another methodology, audio or video artifacts or information done in cooperation with the television signal provider are inserted which must be immediately responded to by the competitor to verify the source of their television signal or monitored at cooperative viewers' television sets.

In another methodology, the various delays through an automated system linked to the game server, which continuously samples the audio or video track of the underlying satellite, cable or over the air broadcast television signals are established around the country to provide the information of the precise arrival of the underlying television picture.

Utilizing software resident in the game control server, game control data for each set of viewers/competitors of the game in progress who are receiving their television picture through the same source are batched together by the game control server, and the appropriate delay is either time stamped on the game "lock out" signals, or is imposed on the entire data stream so that competitors receiving their television information slightly behind or ahead of others gain no material competitive advantage. Another method is for the game control server to send all the game control data to all of the viewers/competitors of the game at the same time, and the client software is able to delay the presentation of the game data based on the viewers' cohort.

Utilizing these methodologies to measure the delays in each cohort, each cohort of viewers would have artificial time delays on the game control information imposed by the game control server, which would substantially equalize the receipt of "lock out" data relative to the event triggering the "lock out," based on the underlying television programming, for example, the snap of the football. Players receiving the television signals in advance of the one with the slowest receipt of the television signal would receive "lock out" signals slightly delayed or time stamped with a slightly later time as described in U.S. Pat. No. 4,592,546. By providing a correspondingly delayed lock out to a viewer receiving their signal later, a potential advantage is mitigated.

Alternatively, this time equalization from cohort to cohort could, for example, involve artificially delaying the transmission of the game control data stream sent to all competitors cell phones or other mobile devices by the appropriate amount of seconds, to sufficiently minimize the advantage a player with a few more seconds of television based information would have. For example, by time stamping the "lock out" signal at an earlier event, such as when the team breaks from the huddle, the chance of some cohorts seeing the actual beginning of the play is eliminated and the discrepancy in propagation delay provides little or no advantage.

FIG. **1** illustrates a flowchart of a process of preventing latency issues from giving an advantage to some participants. In the step **100**, it is determined how each viewer receives a television signal, where possibilities include an over the air broadcast, a particular cable system or a particular satellite system. In the step **102**, it is determined if there is additional processing of the television signal when after the signal enters a viewer/participant's house, office, bar or other location from an item such as a DVR. In the step **104**, the viewers/participants are grouped into groups also referred to as cohorts. In the step **106**, a delay amount is determined for each group. The delay amount is able to be determined by the one or more methods as described above. In the step **108**, the viewers/participants are equalized. The

methods of equalization vary, but some examples include time stamping on the game "lock out" signals, imposing a time stamp on the entire data stream so that competitors receiving their television information is slightly behind or ahead of others gain no material competitive advantage. Another method is for the game control server to send all the game control data to all of the viewers/participants of the game at the same time, and the client software is able to delay the presentation of the game data based on the viewers' group.

Arbitrarily Imposed Delays on the Broadcast of the Signal and the Physically Present Competitor

As a result of the Janet Jackson half time show episode at the 2004 Super Bowl, some networks have announced their intentions to impose up to a 7 second delay on telecasts of live sporting events. More recently an obscenity uttered by a competitor at the conclusion of a live NASCAR race has resulted in another network announcing it may impose a 5-7 second delay on future broadcasts of NASCAR races. These arbitrarily imposed delays are a significantly longer duration than those resulting from the above described propagation delays of the broadcast television or cellular network control information.

A distinct advantage is able to arise for a game player who is physically present at an event being televised which is the basis of a contest of skill in the home, or other location, separate from the live game venue. This is because in certain instances they will receive "lock out" signals generated for competitors among the television viewing audience, particularly if the game producer is not physically present at the venue, but producing by viewing a telecast. This discrepancy would permit prediction entry as much as 7 seconds later than those watching an artificially delayed television picture. This magnitude of delay can result in a significant competitive advantage for the game player who is physically present. For example, a soccer or hockey contest of skill might contain an element where a competitor is given a limited number of opportunities to predict if there will be a "shot on goal" within the next 5 seconds. The 5 second advantage to the competitor physically present would be significant, because the receipt of a lockout signal generated for the huge television audience could occur after a shot had occurred.

In a contest based on a football game, a competitor present at the stadium would receive their "lock out" signals after the play was underway and could often determine whether the play was a pass or a run prior to receipt of the lockout signal. It is also likely that other live televised events such as The Oscars, Grammy's, beauty contests and other television programming that can support games of skill would impose delays on the telecast for the same or different reasons, also providing the opportunity for a competitive advantage for those who are attending the event in person.

The cellular telephone system currently has methodologies to determine a user's physical location. The 911 emergency laws mandate the cellular systems to have the capability of determining the location of a 911 emergency caller within 150 feet. More sophisticated approaches combine cellular site location technology with geosynchronous positioning satellite capabilities. Companies like Qualcomm™ have implemented various location technologies such as Snaptrack, SnapSmart and Snapcore, which provide a cellular phone's physical location within a matter of yards.

For each televised live event, the physical venue for this event would be known by the organizer of a game of skill in advance. Therefore, it is possible to determine for each contest of skill the specific cellular sites which will serve cellular phone owners physically present at that venue. A methodology is employed to identify all of the cellular phones logging into the game server registering to play the game of skill which are co-located within cellular sites servicing the stadium or auditorium where the televised live event is taking place. The present invention is also able to involve a communication methodology between the cellular carrier and the game control computer software contained in the game application resident on a game competitor's phone, which would identify the cellular phone physically in the stadium.

Before the start of the contest of skill, the system informs the central computer of the game selected to be played by each competitor, for example, the San Francisco 49ers versus the New York Giants. The central game control server's software would hold current information on the physical location of the stadium of each game, for example, Candlestick Park in South San Francisco, and the cellular sites covering this location. The software resident on the cellular phone or on the server then identifies the phone as one located physically at the telecast game's venue.

To ensure that potential competitors at the live venue are able to also compete in a contest of skill, the central game server will separate the scoring data and game control data for competitors using these cellular phones in this specific location from the general pool of competitors who are not so located, but watching the game via television. A separate contest is then generated and scored for those competitors who have the advantage of viewing the event live, and a separate prize pool is awarded. This separate game would be produced though the observation of the actual game physically at the venue or through the operation of a non-delayed satellite feed.

If it is ultimately determined that certain groups of television viewers, as opposed to live event attendees, who are competitors in these games of skill are gaining sufficient enough competitive advantage, segregating those players at the extreme ends of the propagation delays, into two or more separate contests with separate sets of prizes, may also be employed as described above. For example, separate contests for satellite viewers versus cable and over the air viewers are able to be generated.

FIG. **2** illustrates a flowchart of a process of preventing participants at a live event from having an unfair advantage over participants watching on television. In the step **200**, a cellular site that serves cellular phones at a venue site is determined for each contest of skill. For example, if a game of skill is played for a game between the San Francisco 49ers and the Oakland Raiders at Candlestick Park in South San Francisco, a specific cellular site serves the cellular phones in that location. In the step **202**, the cellular phones that are utilizing the cellular site of the venue site and are participating in the game of skill for that event are determined. For example, if there are 1,000 cellular phone users in Candlestick Park who register to play in a game of skill involving the 49ers and the Raiders, they are detected by the system. In the step **204**, it is determined if the cellular phone is located within the venue site. The determination is made by comparing the current cellular information with information stored on a server indicating the location of each venue such as Candlestick Park. Based on the determination in the step **204**, separate groups are generated in the step **206**. A group is generated for users that are located at the live venue, and a group is generated for those players that are watching live on television. Therefore, the live players who do not expe-

rience any delay compete against each other, and television viewers compete with others television viewers who have a delay.

In addition to implementing the above-mentioned solutions to latency issues, additional groups are able to be generated if the delays between signal providers are not resolved. For example, all viewers with satellite television signals compete against each other, and all cable television viewers compete against each other, with no cross competition.

Taped and Syndicated Television Programs

A separate but related latency problem arises in the case of syndicated television shows, which are by necessity pre-taped. Examples are game shows like Wheel of Fortune™ and Jeopardy™. These pre-recorded television game shows are generally syndicated, meaning they are sold to a specific television station on an exclusive lease for the local television market served by the station's signal. The television stations generally air these half hour episodes at various times in "prime time access," which is generally considered between 6-8 pm. Therefore, with 3 different time zones in the United States, the start times will differ from market to market. In addition, the precise time each commercial bracketed television show segment that is broadcast is able to vary by a few seconds based on the time each station's engineering personnel starts the show's segments after the insertion of local and national commercials. Thus, for a show like Jeopardy™, there might be over 100 separate slightly different broadcasts from a time standpoint for a single episode of Jeopardy™ on a given day. In addition, these syndicated telecasts can also experience the same propagation delays as described above.

Contests of skill on cellular phones around these syndicated telecasts are produced with the cooperation of the game show producers, and game data files are produced which are precisely time-synchronized to the final video tape of the television game show. These files must be precisely synchronized and a delay of just a few seconds could give an unfair competitive advantage to a viewer who is receiving their "lock out" signal later than another competitor in a fast paced game like Jeopardy™. The game data files must be synchronized with the television show at the beginning of the program and again as the show returns to the game competition from each commercial break.

This solution addresses the separate, but related problems of synchronizing game data files with the broadcast of prerecorded and syndicated games, entertainment, reality or other television programming that is aired in different time zones at the choice of the purchasing television station. As opposed to live sporting events, the game production for this genre of programming is not done live through real-time observation of the unfolding telecast but is produced in advance with the cooperation of the show producer as a time synchronized file utilizing the final edited for broadcast, television program.

In general, the game data files are divided into separate "segments" which comprise the entire television program and aired between the insertion of national, regional and local advertising. As the television program returns from the opening commercials, the initial game or entertainment segment is launched by the game producer, synchronized to the playing of the television tape, and the data files for this segment would end with the first commercial break. The other game "chapters" are resynchronized as each segment of the telecast resumes from commercial break. The local telecasts might have variations of anywhere from 1 to 5 seconds, or more, resulting from the use of different commercials by different stations, and the variances in the local production by the engineering management of the syndicated telecasts.

This invention protects a system which first determines all of the separate and unique television markets where the cellular phone service will be offered in connection with a syndicated, taped version of an underlying television program, for example, Jeopardy™. Network broadcasts usually air in three separate time zones. This information is available from the shows syndicator, for example, Jeopardy™, the syndicator King World™ or Sony™, the show's licensor. This information is also publicly available through the various television guides. The game production servers hold the pre-produced game data files to be broadcast to the cellular phones of the participating subscribers, containing, for example, the correct answers and possibly some intentionally wrong multiple choice answers in the case of Jeopardy™ or other multiple choice based game shows. The server begins the broadcast of its time synchronized files for each discrete telecast of a single television program at a precise start point for each "segment" or chapter. With knowledge of the precise timing of the discrete segments of the broadcast, for each separate syndicated market, the server transmits the pre-recorded files in most cases, at a slightly separate and different time to each viewer who is viewing the telecast in a particular market via a particular broadcast, satellite or cable signal.

The precise start times of the beginning episode of a game show and the start times of the other segments, beginning as the show resumes after a national and local commercial are delivered to the server through various methodologies.

One methodology requires the cooperation of an employee of the game provider based on visual observation of the telecast for that market, utilizing a personal computer and the Internet, or by utilizing their local cellular phone, all coupled to the game server.

Another methodology includes utilizing an audio or video recognition system with online access to the broadcast of the underlying television program for each separate market which provides real-time tracking of the television broadcast to the game control server, ensuring the game data file is able to be precisely synchronized to the television picture. Information is also able to be inserted in a Vertical Banking Interval (VBI) of the taped syndicated show and tracked online in real time by the game control server. For remote telecasts and online connection from a remote device, reading data embedded in the VBI via a high speed connection to the central game server is utilized. Utilizing some of the procedures outlined above, the propagation delays in the receipt of the cellular transmissions are also monitored and the game server adjusts the data files containing the "lock outs" to accommodate the systemic delay in the delivery of the game data on the cellular networks.

Another methodology, with the cooperation of the producers of game shows, precise audio or video events in the telecast could either be added to the video, such as a visible count down, or existing events in the telecast identified by the producers as synchronization points which the competitors could utilize as start points for the previously downloaded data files at the press of an appropriate button on their cellular phone. This would trigger the launch of a program previously downloaded to the phone's RAM. Then, time synchronization would be launched.

One more methodology uses an audio signal, possibly sub-audible to humans, which is inserted into the taped audio track recognizable by the audio receiver in a cellular phone which would be utilized to start and/or continually

keep the pre-produced data files resident on the cellular phone in synchronization with the telecast.

FIG. **3** illustrates a flowchart of a process of handling latency issues for taped programs. In the step **300**, pre-produced game data files are stored in servers; preferably, game production servers. The game data files include information required to participate in a game such as questions and answers for a trivia game like Jeopardy™. In the step **302**, start times are determined for each discrete telecast of a show. The start times are determined as described above, such as with the cooperation of a game provider employee, utilizing an audio/video recognition system, using a visible count down or a recognizable signal which is able to be recognized by a cellular phone. Other ways of determining start times are possible as well. In the step **304**, the game data files are transmitted at appropriate times based on the start times for each separate market. Furthermore, if additional delays are recognized, such as those delays described above, that is able to be accounted for.

FIG. **4** illustrates a graphical representation of an embodiment of the present invention. A server **400** contains applications **402** and a storage mechanism **404**. The applications **402** include an application to generate and modify game control data. The game control data is eventually transferred to users' cellular phones. If necessary the game control data is synchronized and time-stamped for each group, so that, as described previously, there are no unfair advantages for the competitors. A location application stored on the server **400** is able to determine which cellular phones are logged into the server **400** and what their location is. A grouping application is able to separate information such as scoring data and game control data into different groups. The grouping application also separates the cellular phones into groups or cohorts as described above. The storage mechanism **404** is utilized for storing the applications **402** in addition to selections and results. The storage mechanism **404** preferably includes a database for organizing the data including the selections, results, standings and groups amongst other data needed for executing the competitions. The server **400** is part of a network **406**. A device **408** couples to the server **400** through the network **406**. In some embodiments the network **406** includes the Internet. In some embodiments, the network **406** includes a cellular network. Also, in some embodiments, the network **406** includes both the Internet and a cellular network. The device **408** is preferably a cellular phone. In other embodiments a PDA, a computer, a laptop or any other device capable of communicating with the server **400** is possible. The device **408** stores a variety of applications **410**. A game application is stored on the device **408**. In some embodiments, software to identify the physical location of the device **408** is stored on the device **408**. The device **408** also receives the game control data which ensures no competitors have an unfair advantage using the methodologies described above. Furthermore, the device **408** receives game data which is used to play the games. An example of game data includes Jeopardy™ multiple choice answers. Additional applications are able to be included on the server **400** and on the device **408**, as necessary, for smooth operation of the games. Although some of the applications are described separately above, in some embodiments, the applications are included in one large application.

FIG. **5** illustrates a graphical representation of a network of devices of the present invention. A server **400** is coupled to many devices through a network **406**. The devices are grouped into groups or cohorts as described above. For example, Group 1 of devices **500** includes a set of devices that receive a television signal through cable with a delay time of x. Group 2 of devices **502** includes a set of devices that receive a television signal through satellite with a delay time of y. Group 3 of devices **504** includes a set of devices that receive a television signal over the air with a delay time of z. Then, based on the delay times of each group, steps need to be taken to ensure these delays do not affect the ability of users to play a game of skill which corresponds to a live event shown on television. As described above, a lockout signal is sent at the appropriate time depending on the delay, or a lockout signal is sent, but included with the lockout signal is information for the lockout not to be implemented until the delay is accounted for. This ensures that users with different delays based on their television signal reception path do not receive advantages or disadvantages. Furthermore, in addition to the delays being related to the type of signal reception path such as cable versus satellite, the delays could also be related to other aspects of the signal reception path such as the location of the receiving television or the type of equipment that one television company uses versus another.

To utilize the present invention, for the most part, a participant in a game of skill playing on his/her mobile device does not have to perform any different actions when playing a standard game of skill without the present invention. The user simply plays as usual except that with the present invention, users with faster or slower connections do not receive any advantages or disadvantages. In embodiments which require user input, the user performs an action, such as recognizing an event to synchronize the game with a live or taped event. For game producers, implementing the present invention is able to be automated or performed manually. Automation includes technology to automatically determine the start of an event such as automatically detecting the start of a football game. Manual implementation requires a person to watch an event and respond to that event such as watching a football game and noting when the first play occurs in order to synchronize the "lock out" signal appropriately.

In operation, the present invention is able to synchronize separate games of skill which have different latencies based on television signal reception differences, random delays and/or other delays. For live events where all of the participants are watching the event on television and participating in a game of skill corresponding to that live event, delays related to the television signal reception differences have to be handled. Television signal reception differences occur because some televisions receive the live event signal via satellite, while others have cable and still others have something else. The signals do not arrive at the participants at the same time. Therefore, to ensure fair competition, participants are separated into groups or cohorts based on delivery system type, location and other parameters that affect the timing of the signal. Then, using a mechanism described above, the delay for each group is determined. Based on that determined delay, the game of skill is able to be configured with the appropriate timing for a lock out signal, so that each participant has the same amount of time to select an answer and also sees the same amount of the live event as others before the lock out occurs.

For games of skill where there are both participants attending the event live and watching it on television which typically has a few seconds delay, the participants are separated into different competitive groups wherein the attending participants are in one group and the television viewing participants are in another group.

For games of skill using tape recorded events like game shows, the important aspect is ensuring the game of skill corresponds with the televised recorded event. For example, if the game of skill were off by a few seconds, participants could receive multiple choice answers to the wrong questions. Therefore, the present invention ensures that the game of skill is synchronized with the taped televised event even when there are different latencies depending on how and where the television signal is being displayed.

Furthermore, although the methods of handling latency have been described above as handling a specific scenario such as delays in television signal reception, the methods are able to be used in conjunction with each other as well. For example, when participants are separated into attending and televised groups because some participants are actually attending an event while others watch it on television, for those watching it on television there will still be issues from location to location and based on the television signal reception, so the latency balancer which handles that aspect of latency is also able to be implemented.

The present invention has been described in terms of specific embodiments incorporating details to facilitate the understanding of principles of construction and operation of the invention. Such reference herein to specific embodiments and details thereof is not intended to limit the scope of the claims appended hereto. It will be readily apparent to one skilled in the art that other various modifications may be made in the embodiment chosen for illustration without departing from the spirit and scope of the invention as defined by the claims.

What is claimed is:

1. A method of equalizing effects of latency issues in synchronization of display of data files on an Internet coupled device with a live event, wherein a game of skill or chance or entertainment is run in conjunction with the live event and wherein the game of skill or chance or entertainment comprises data files, the method comprising:

a. storing the data files on a server which relate to the live event;

b. determining one or more game elements in the live event; and

c. transmitting the files from the server to each of a plurality of Internet coupled devices corresponding to the one or more game elements; and

d. sending a lockout signal to prevent users from submitting a response to the game of skill or chance or other entertainment after a result of the game element has been revealed within the live event, wherein determining a time of the lockout signal includes utilizing a person observing a television feed located remotely from the live event.

2. The method as claimed in claim **1** wherein an application on the Internet coupled device starts using the data files at one or more start times.

3. The method as claimed in claim **1** wherein the data files are television broadcast related files.

4. The method as claimed in claim **2** wherein determining the one or more start times includes at least one of:

a. utilizing a signal originating from the venue to synchronize data files based on visual observation of a telecast;

b. utilizing an individual in physical attendance at a venue corresponding to the live event;

c. utilizing a computer generated signal based on real time computer analysis of a data feed originating from the live event;

d. utilizing at least one of an audio and video recognition system with online access to the live event for each separate market which provides real-time tracking of the live event to the server;

e. inserting at least one of an audio and video event in the live event which is recognizable at a starting point;

f. designating at least one of the audio and video event in the live event which is recognizable as the starting point;

g. utilizing an audio signal, inserted within the live event recognizable by an audio receiver of the Internet coupled device; and

h. using a vertical blanking interval.

5. The method of claim **1** wherein the live event comprises commercials.

6. The method of claim **5** wherein questions or information related to the commercials to be displayed at precise times before, during and after the commercials are sent to the Internet coupled device in synchronization with the live event.

7. The method of claim **6** wherein an incentive is awarded for answering the questions on the Internet coupled device in synchronization with the live event of the commercials.

8. The method of claim **1** wherein existing game elements in the live event are used as synchronization points as start points for previously downloaded data files to an Internet coupled device.

9. The method of claim **1** wherein a synchronization point is a visible or audible event located within the live event, and the synchronization point is used to synchronize the live event and the set of data files.

10. The method of claim **1** wherein information is inserted in a Vertical Blanking Interval (VBI) or equivalent of a show and tracked online in real-time.

11. The method of claim **1** wherein information is embedded in the live event and tracked online in real-time.

12. The method of claim **2** wherein determining the one or more start times of the live event includes using a recognizable signal recognizable by the Internet coupled devices.

13. The method of claim **1** further comprising delivering a start time of a commercial using a recognizable signal recognizable by the Internet coupled device.

14. The method of claim **1** wherein the data files comprise pre-produced data files.

15. The method of claim **14** wherein the pre-produced data files comprise real-time entertainment sent simultaneously to the Internet coupled devices.

16. The method of claim **14** wherein a plurality of synchronization points are used by the Internet coupled devices to continuously check to ensure the pre-produced data files are synchronized with the live event.

17. The method of claim **14** wherein inserted audio or video in the live event is used to continuously check to ensure the pre-produced data files are precisely synchronized on the client with the live event.

18. The method of claim **17** wherein the inserted audio or video is used by a client to continuously check to ensure the pre-produced data files are precisely synchronized on the client with the live event.

19. The method of claim **17** wherein the inserted audio or video is used by a server to periodically check to ensure the pre-produced data files are precisely synchronized on the client with the live event.

20. The method of claim **1** wherein an artifact is inserted into the live event recognizable by an audio receiver in an Internet coupled device which is utilized to start and con-

tinually keep a game of skill or chance or entertainment synchronized with the live event.

21. The method of claim **1** wherein the game of skill or chance ends when the live event ends.

22. The method of claim **1** wherein the server sends the game of skill or chance or entertainment to an application resident on the Internet coupled device.

23. The method of claim **1** wherein the game of skill or chance or entertainment is stored in a memory of the Internet coupled device.

24. The method of claim **1** wherein the game of skill or chance or entertainment is stored in random access memory of the Internet coupled device.

25. The method of claim **1** further comprising displaying the game of skill or chance or entertainment on the Internet coupled device.

26. The method of claim **1** wherein an earliest receipt of a television signal by participants is utilized for equalizing locking out all participants receiving the live event later.

27. The method of claim **1** further comprising establishing a delay between reception of a broadcast of the live event and the live event.

28. The method of claim **27** wherein establishing the delay results in synchronization of reception of the broadcast of the live event and presentation of game-related data on the Internet coupled device allowing the presented game-related data to coincide with the game elements in the live event.

29. The method of claim **1** further comprising determining a shortest delay experienced by participants in receiving a broadcast of the live event and applying lockouts to the participants based on the shortest delay.

30. The method of claim **1** wherein participants comprise ad hoc or preexisting groups of friends competing in a separate competition from disparate physical locations.

31. The method of claim **9** wherein the synchronization points are the audio or video data for the live event residing on the server online with the Internet coupled device.

32. The method of claim **1** wherein participants constitute ad hoc or existing groups of geographically dispersed friends participating in a separate game of chance or skill or entertainment.

33. The method of claim **32** wherein the participants are ad hoc or previously organized groups of friends competing against each other in a separate contest.

34. The method of claim **33** wherein equalizing the participants comprises time stamping an amount of delay on game-related data.

35. The method of claim **1** wherein the live event is recorded and stored on a digital video recorder.

36. The method of claim **1** further comprising determining if there is additional processing of a broadcast of the live event increasing a total length of delay.

37. The method of claim **1** wherein a delay includes a digital video recorder delay wherein the live event is recorded on the digital video recorder.

38. The method of claim **1** further comprising equalizing a delay wherein equalizing incorporates time stamping the amount of delay on a game lock out signal, imposing the amount of delay on an entire game data stream and sending game control data to the participant cohorts at the same time where client software delays presentation of game data based on a precise viewing time of the live event.

39. The method of claim **1** wherein a client used in connection with viewing a time shifted telecast of a previously recorded program utilizes automatic content recognition to synchronize preproduced game data files to precisely synchronize game data files with the recorded telecast.

40. The method of claim **1** wherein a client used in connection with viewing a delayed program utilizes automatic content recognition to synchronize preproduced game data files to precisely synchronize game data files with the recorded telecast.

41. The method of claim **1** wherein determining comprises establishing an amount of delay through an automated system linked to a server, which samples an audio track of a satellite or over the air broadcast signal, to provide information related to a precise arrival of a broadcast of the live event.

42. The method of claim **1** wherein the live event is recorded on a digital video recorder.

43. The method of claim **1** further comprising equalizing latency issues comprising determining an amount of delay for an earliest arriving broadcast of the live event, imposing the amount of delay on an entire game data stream, and sending game control data to one or more participants at a same time relative to receipt of a broadcast of the live event.

44. The method of claim **43** wherein client software delays presentation of game data based on a precise time of reception of the broadcast by a group.

45. The method of claim **43** wherein the server delays presentation of game data based on a precise time of reception of the broadcast by a group.

46. The method of claim **1** further comprising determining an amount of delay, imposing the amount of delay on a game data stream, sending game control data to one or more participants taking into account the amount of delay and grouping users into one or more cohorts, wherein a first amount of delay is imposed on participants in a first cohort and a second amount of delay is imposed on participants in a second cohort.

47. The method of claim **1** wherein the live event and the data files are presented on a same screen.

48. The method of claim **1** wherein the live event and the data files are presented on different screens.

49. The method of claim **1** wherein electronics receiving and displaying the live event on a first screen coupled to a game server via the Internet provide control information to a second screen.

50. The method of claim **1** wherein the live event and the data files are synchronized utilizing one or more start signals generated by a game producer.

51. The method of claim **1** wherein the live event and the data files are synchronized utilizing a signal sent from a game server at a predetermined time.

52. The method of claim **1** wherein the person is an employee of a game or related service provider.

53. The method of claim **1** wherein determining the time of the lockout signal includes utilizing a person based on physical attendance at a venue corresponding to the live event.

54. The method of claim **53** wherein the venue comprises a physical venue for an event.

55. The method of claim **54** wherein the person observes the event at the physical venue.

56. The method of claim **1** wherein the lockout is sent immediately before competitors are able to see a play unfold.

57. The method of claim **1** wherein the lockout is sent immediately before competitors are able to hear a play unfold.

58. The method of claim **1** wherein the lockout is sent immediately before a scoring chance in an event.

59. The method of claim **1** wherein the lockout signal applies for a limited amount of time.

60. The method of claim 1 wherein the lockout signal applies for an action lasting a limited amount of time.

61. The method of claim 1 wherein the time of the lockout signal is automated by software utilizing a live data feed originating from the live event.

62. The method of claim 1 wherein the television feed observed by the person has a predetermined amount of latency from the live event.

63. The method of claim 1 wherein the data files are continuously produced based on unfolding action within the live event.

64. A method of equalizing effects of latency issues in synchronization of display of data files on an Internet coupled device with a live event, wherein a game of skill or chance or entertainment is run in conjunction with the live event and wherein the game of skill or chance or entertainment comprises data files, the method comprising:

a. storing the data files on a server which relate to the live event;

b. determining one or more game elements in the live event; and

c. transmitting the data files from the server to each of a plurality of Internet coupled devices corresponding to the one or more game elements;

d. sending a lockout signal to prevent users from submitting a response to the game of skill or chance or other entertainment after a result of the game element has been revealed within the live event; and

e. equalizing latency issues comprising determining an amount of delay, imposing the amount of delay on a game data stream and sending game control data to one or more participants taking into account the amount of delay.

65. The method of claim 64 wherein the amount of delay is imposed on the entire game data stream.

66. The method of claim 64 further comprising grouping participants into one or more cohorts, wherein a first amount of delay is imposed on participants in a first cohort and a second amount of delay is imposed on participants in a second cohort.

67. The method of claim 64 wherein client software delays presentation of game data based on a precise time of reception of a broadcast of the live event by a group.

68. The method of claim 67 wherein the server delays presentation of game data based on a precise time of reception of a broadcast of the live event by a group.

69. The method of claim 67 wherein sending the lockout signal comprises utilizing a person based on physical attendance at a venue corresponding to the live event.

70. The method of claim 64 wherein an application on the Internet coupled device starts using the set of files at one or more start times.

71. The method of claim 64 wherein the live event comprises commercials.

72. The method of claim 71 wherein questions or information related to the commercials to be displayed at precise times before, during and after the commercials are sent to the Internet coupled device in synchronization with the live event.

73. The method of claim 72 wherein an incentive is awarded for answering the questions on the Internet coupled device in synchronization with the live event of the commercials.

74. The method of claim 64 wherein existing game elements in the live event are used as synchronization points as start points for previously downloaded data files to an Internet coupled device.

75. The method of claim 64 wherein a synchronization point is a visible or audible event located within the live event, and the synchronization point is used to synchronize the live event and the set of data files.

76. The method of claim 64 wherein information is inserted in a Vertical Blanking Interval (VBI) or equivalent of a show and tracked online in real-time.

77. The method of claim 64 wherein information is embedded in the live event and tracked online in real-time.

78. The method of claim 70 wherein determining the one or more start times of the live event includes using a recognizable signal recognizable by the Internet coupled devices.

79. The method of claim 64 further comprising delivering a start time of a commercial using a recognizable signal recognizable by the Internet coupled device.

80. The method of claim 64 wherein a game of skill or chance or entertainment is run in conjunction with the live event and wherein the game of skill or chance or entertainment comprises pre-produced data files.

81. The method of claim 80 wherein the pre-produced data files comprise real-time entertainment sent simultaneously to the Internet coupled devices.

82. The method of claim 80 wherein a plurality of synchronization points are used by the Internet coupled devices to continuously check to ensure the pre- produced data files are synchronized with the live event.

83. The method of claim 80 wherein inserted audio or video in the live event is used to continuously check to ensure the pre-produced data files are precisely synchronized on the client with the live event.

84. The method of claim 83 wherein the inserted audio or video is used by a client to continuously check to ensure the pre-produced data files are precisely synchronized on the client with the live event.

85. The method of claim 83 wherein the inserted audio or video is used by a server to periodically check to ensure the pre-produced data files are precisely synchronized on the client with the live event.

86. The method of claim 64 wherein an artifact is inserted into the live event recognizable by an audio receiver in an Internet coupled device which is utilized to start and continually keep a game of skill or chance or entertainment synchronized with the live event.

87. The method of claim 64 wherein the game of skill or chance ends when the live event ends.

88. The method of claim 64 wherein the server sends the game of skill or chance or entertainment to the Internet coupled device.

89. The method of claim 64 wherein the game of skill or chance or entertainment is stored in a memory of the Internet coupled device.

90. The method of claim 64 wherein the game of skill or chance or entertainment is stored in random access memory of the Internet coupled device.

91. The method of claim 64 further comprising displaying the game of skill or chance or entertainment on the Internet coupled device.

92. The method of claim 64 wherein an earliest receipt of a television signal by participants is utilized for equalizing locking out all participants receiving the live event later.

93. The method of claim 64 further comprising determining the amount of delay between reception of a broadcast of the live event and the live event.

94. The method of claim 93 wherein determining the amount of delay results in synchronization of reception of the broadcast of the live event and presentation of game-

related data on the Internet coupled device allowing the presented game-related data to coincide with the game elements in the live event.

95. The method of claim **64** further comprising determining a shortest delay experienced by participants in receiving a broadcast of the live event and applying lockouts to the participants based on the shortest delay.

96. The method of claim **64** wherein participants comprise ad hoc or preexisting groups of friends competing in a separate competition from disparate physical locations.

97. The method of claim **75** wherein the synchronization points are the audio or video data for the live event residing on the server online with the Internet coupled device.

98. The method of claim **64** wherein participants constitute ad hoc or existing groups of geographically dispersed friends participating in a separate game of chance or skill or entertainment.

99. The method of claim **98** wherein the participants are ad hoc or previously organized groups of friends competing against each other in a separate contest.

100. The method of claim **99** wherein equalizing the participants comprises time stamping an amount of delay on game-related data.

101. The method of claim **64** wherein the live event is recorded and stored on a digital video recorder.

102. The method of claim **64** further comprising determining if there is additional processing of a broadcast of the live event increasing a total length of delay.

103. The method of claim **64** wherein a delay includes a digital video recorder delay wherein the live event is recorded on the digital video recorder.

104. The method of claim **64** further comprising equalizing a delay wherein equalizing incorporates time stamping the amount of delay on a game lock out signal, imposing the amount of delay on an entire game data stream and sending game control data to the participant cohorts at the same time where client software delays presentation of game data based on a precise viewing time of the live event.

105. The method of claim **64** wherein a client used in connection with viewing a time shifted telecast of a previously recorded program utilizes automatic content recognition to synchronize preproduced game data files to precisely synchronize game data files with the recorded telecast.

106. The method of claim **64** wherein a client used in connection with viewing a delayed program utilizes automatic content recognition to synchronize preproduced game data files to precisely synchronize game data files with the recorded telecast.

107. The method of claim **64** wherein determining comprises determining the amount of delay through an automated system linked to a server, which samples an audio track of a satellite or over the air broadcast signal, to provide information related to a precise arrival of a broadcast of the live event.

108. The method of claim **64** wherein the live event and the data files are presented on a same screen.

109. The method of claim **64** wherein the live event and the data files are presented on different screens.

110. The method of claim **64** wherein electronics receiving and displaying the live event on a first screen coupled to a game server via the Internet provide control information to a second screen.

111. The method of claim **64** wherein the live event and the data files are synchronized utilizing one or more start signals generated by a game producer.

112. The method of claim **64** wherein the live event and the data files are synchronized utilizing a signal sent from a game server at a predetermined time.

113. The method of claim **64** wherein the lockout is sent immediately before competitors are able to see a play unfold.

114. The method of claim **64** wherein the lockout is sent immediately before competitors are able to hear a play unfold.

115. The method of claim **64** wherein the lockout is sent immediately before a scoring chance in an event.

116. The method of claim **64** wherein the lockout signal applies for a limited amount of time.

117. The method of claim **64** wherein the lockout signal applies for an action lasting a limited amount of time.

118. The method of claim **64** wherein sending the lockout signal is automated by software utilizing a live data feed originating from the live event.

119. The method of claim **64** wherein the data files are continuously produced based on unfolding action within the live event.

* * * * *

Exhibit 3

US011338189B2

(12) **United States Patent**
Lockton

(10) **Patent No.: US 11,338,189 B2**
(45) **Date of Patent: *May 24, 2022**

(54) **METHOD OF AND SYSTEM FOR CONDUCTING MULTIPLE CONTESTS OF SKILL WITH A SINGLE PERFORMANCE**

(71) Applicant: **Winview, Inc.**, Redwood City, CA (US)

(72) Inventor: **David B. Lockton**, Redwood City, CA (US)

(73) Assignee: **Winview, Inc.**, Redwood City, CA (US)

(*) Notice: Subject to any disclaimer, the term of this patent is extended or adjusted under 35 U.S.C. 154(b) by 0 days.

This patent is subject to a terminal disclaimer.

(21) Appl. No.: **17/024,330**

(22) Filed: **Sep. 17, 2020**

(65) **Prior Publication Data**

US 2021/0001204 A1 Jan. 7, 2021

Related U.S. Application Data

(63) Continuation of application No. 16/221,307, filed on Dec. 14, 2018, now Pat. No. 10,806,988, which is a (Continued)

(51) **Int. Cl.**
A63B 71/06 (2006.01)
G07F 17/32 (2006.01)
(Continued)

(52) **U.S. Cl.**
CPC ***A63B 71/06*** (2013.01); ***A63F 13/31*** (2014.09); ***A63F 13/35*** (2014.09); ***A63F 13/795*** (2014.09);
(Continued)

(58) **Field of Classification Search**
None
See application file for complete search history.

(56) **References Cited**

U.S. PATENT DOCUMENTS

2,831,105 A 4/1958 Parker
3,562,650 A 2/1971 Gossard et al.
(Continued)

FOREIGN PATENT DOCUMENTS

CA 2252074 11/1997
CA 2252021 11/1998
(Continued)

OTHER PUBLICATIONS

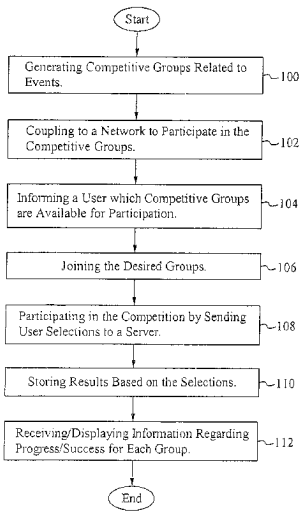
Two Way TV Patent and Filing Map www.twowaytv.com/version4/technologies/tech_patents.asp.
(Continued)

Primary Examiner — Ronald Laneau
(74) *Attorney, Agent, or Firm* — Haverstock & Owens, A Law Corporation

(57) **ABSTRACT**

A method and system for conducting multiple competitions of skill for a single performance are described herein. User generated competition groups and system generated competition groups allow users to participate in multiple competitions at once based on answering the same questions or making the same selections related to a single event. The users are informed of each competition either via email, text message or when logging into the network via a website. The users select which competition groups to join. After joining the desired groups, users then make their selections related to the event which are transmitted to the network where results are tabulated and transmitted back to the users. The results are separated based on each competition group, so that users can continually know where they stand in each separate competition. With multiple competition groups, users are able to have varying success from the same performance in multiple competitions.

38 Claims, 3 Drawing Sheets



Related U.S. Application Data

continuation of application No. 15/485,145, filed on Apr. 11, 2017, now Pat. No. 10,186,116, which is a continuation of application No. 14/927,227, filed on Oct. 29, 2015, now Pat. No. 9,652,937, which is a continuation of application No. 14/706,802, filed on May 7, 2015, now Pat. No. 9,314,686, which is a continuation of application No. 13/246,464, filed on Sep. 27, 2011, now Pat. No. 9,056,251, which is a continuation-in-part of application No. 13/215,052, filed on Aug. 22, 2011, now Pat. No. 8,622,798, which is a continuation of application No. 11/652,240, filed on Jan. 10, 2007, now Pat. No. 8,002,618.

(60) Provisional application No. 60/757,960, filed on Jan. 10, 2006.

(51) **Int. Cl.**

A63F 13/31	(2014.01)
A63F 13/795	(2014.01)
A63F 13/35	(2014.01)
A63F 13/80	(2014.01)

(52) **U.S. Cl.**

CPC ***A63F 13/80*** (2014.09); ***G07F 17/32*** (2013.01); ***G07F 17/3227*** (2013.01); ***G07F 17/3241*** (2013.01); ***G07F 17/3255*** (2013.01); ***G07F 17/3276*** (2013.01); ***G07F 17/3288*** (2013.01); ***G07F 17/3293*** (2013.01); ***G07F 17/3295*** (2013.01)

(56) **References Cited**

U.S. PATENT DOCUMENTS

4,141,548	A	2/1979	Everton
4,270,755	A	6/1981	Willhide et al.
4,386,377	A	5/1983	Hunter, Jr.
4,496,148	A	1/1985	Morstain et al.
4,521,803	A	6/1985	Glittinger
4,592,546	A	6/1986	Fascenda et al.
4,816,904	A	3/1989	McKenna et al.
4,918,603	A	4/1990	Hughes et al.
4,930,010	A	5/1990	MacDonald
5,013,038	A	5/1991	Luvenberg
5,018,736	A	5/1991	Pearson et al.
5,035,422	A	7/1991	Berman
5,073,931	A	12/1991	Audebert et al.
5,083,271	A	1/1992	Thatcher et al.
5,083,800	A	1/1992	Lockton
5,119,295	A	6/1992	Kapur
5,120,076	A	6/1992	Luxenberg et al.
5,213,337	A	5/1993	Sherman
5,227,874	A	7/1993	Von Kohom
5,256,863	A	10/1993	Ferguson
5,263,723	A	11/1993	Pearson et al.
5,283,734	A	2/1994	Von Kohom
5,327,485	A	7/1994	Leaden
5,343,236	A	8/1994	Koppe et al.
5,343,239	A	8/1994	Lappington et al.
5,417,424	A	5/1995	Snowden
5,462,275	A	10/1995	Lowe et al.
5,479,492	A	12/1995	Hofstee et al.
5,488,659	A	1/1996	Millani
5,519,433	A	5/1996	Lappington
5,530,483	A	6/1996	Cooper
5,553,120	A	9/1996	Katz
5,566,291	A	10/1996	Boulton et al.
5,585,975	A	12/1996	Bliss
5,586,257	A	12/1996	Perlman
5,589,765	A	12/1996	Ohmart et al.
5,594,938	A	1/1997	Engel
5,618,232	A	4/1997	Martin
5,628,684	A	5/1997	Jean-Etienne
5,636,920	A	6/1997	Shur et al.
5,638,113	A	6/1997	Lappington
5,643,088	A	7/1997	Vaughn et al.
5,663,757	A	9/1997	Morales
5,759,101	A	6/1998	Won Kohom
5,761,606	A	6/1998	Wolzien
5,762,552	A	6/1998	Voung et al.
5,764,275	A	6/1998	Lappington et al.
5,794,210	A	8/1998	Goldhaber et al.
5,805,230	A	9/1998	Staron
5,813,913	A	9/1998	Berner et al.
5,818,438	A	10/1998	Howe et al.
5,828,843	A	10/1998	Grimm
5,838,774	A	11/1998	Weiser, Jr.
5,838,909	A	11/1998	Roy
5,846,132	A	12/1998	Junkin
5,848,397	A	12/1998	Marsh et al.
5,860,862	A	1/1999	Junkin
5,894,556	A	4/1999	Grimm
5,916,024	A	6/1999	Von Kohom
5,870,683	A	9/1999	Wells et al.
5,970,143	A	10/1999	Schneier et al.
5,971,854	A	10/1999	Pearson et al.
5,987,440	A	11/1999	O'Neil et al.
6,009,458	A	12/1999	Hawkins et al.
6,015,344	A	1/2000	Kelly et al.
6,016,337	A	1/2000	Pykalisto
6,038,599	A	3/2000	Black
6,042,477	A	3/2000	Addink
6,064,449	A	5/2000	White
6,104,815	A	8/2000	Alcorn et al.
6,110,041	A	8/2000	Walker et al.
6,117,013	A	9/2000	Elba
6,126,543	A	10/2000	Friedman
6,128,660	A	10/2000	Grimm
6,135,881	A	10/2000	Abbott et al.
6,154,131	A	11/2000	Jones, II
6,174,237	B1	1/2001	Stephenson
6,182,084	B1	1/2001	Cockrell et al.
6,193,610	B1	2/2001	Junkin
6,222,642	B1	4/2001	Farrell et al.
6,233,736	B1	5/2001	Wolzien
6,251,017	B1	6/2001	Leason et al.
6,263,447	B1	7/2001	French
6,267,670	B1	7/2001	Walker
6,287,199	B1	9/2001	McKeown et al.
6,293,868	B1	9/2001	Bernard
6,312,336	B1	11/2001	Handelman et al.
6,343,320	B1	1/2002	Fairchild
6,345,297	B1	2/2002	Grimm
6,371,855	B1	4/2002	Gavriloff
6,373,462	B1	4/2002	Pan
6,411,969	B1	6/2002	Tam
6,416,414	B1	7/2002	Stadelmann
6,418,298	B1	7/2002	Sonnenfeld
6,425,828	B2	7/2002	Walker et al.
6,434,398	B1	8/2002	Inselberg
6,446,262	B1	9/2002	Malaure et al.
6,470,180	B1	10/2002	Kotzin et al.
6,475,090	B2	11/2002	Gregory
6,524,189	B1	2/2003	Rautila
6,527,641	B1	3/2003	Sinclair et al.
6,530,082	B1	3/2003	Del Sesto et al.
6,536,037	B1	3/2003	Guheen et al.
6,578,068	B1	6/2003	Bowma-Amuah
6,594,098	B1	7/2003	Sutardja
6,604,997	B2	7/2003	Saidakovsky et al.
6,610,953	B1	8/2003	Tao et al.
6,611,755	B1	8/2003	Coffee
6,648,760	B1	11/2003	Nicastro
6,659,860	B1	12/2003	Yamamoto et al.
6,659,861	B1	12/2003	Faris
6,659,872	B1	12/2003	Kaufman et al.
6,690,661	B1	2/2004	Agarwal et al.
6,697,869	B1	2/2004	Mallart
6,718,350	B1	4/2004	Karbowski
6,752,396	B2	6/2004	Smith
6,758,754	B1	7/2004	Lavanchy et al.
6,758,755	B2	7/2004	Kelly et al.

(56) **References Cited**

U.S. PATENT DOCUMENTS

6,760,595 B2 7/2004 Insellberg
6,763,377 B1 7/2004 Balknap et al.
6,766,524 B1 7/2004 Matheny et al.
6,774,926 B1 8/2004 Ellis et al.
6,785,561 B1 8/2004 Kim
6,801,380 B1 10/2004 Saturdja
6,806,889 B1 10/2004 Malaure et al.
6,807,675 B1 10/2004 Millard et al.
6,811,482 B2 11/2004 Letovsky
6,811,487 B2 11/2004 Sengoku
6,816,628 B1 11/2004 Sarachik et al.
6,817,947 B2 11/2004 Tanskanen
6,824,469 B2 11/2004 Allibhoy et al.
6,837,789 B2 1/2005 Garahi et al.
6,837,791 B1 1/2005 McNutt et al.
6,840,861 B2 1/2005 Jordan et al.
6,845,389 B1 1/2005 Sen
6,846,239 B2 1/2005 Washio
6,849,255 B2 2/2005 Gazit
6,857,122 B1 2/2005 Takeda et al.
6,863,610 B2 3/2005 Vancraeynest
6,870,720 B2 3/2005 Iwata et al.
6,871,226 B1 3/2005 Ensley et al.
6,873,610 B1 3/2005 Noever
6,884,166 B2 4/2005 Leen et al.
6,884,172 B1 4/2005 Lloyd et al.
6,887,159 B2 5/2005 Leen et al.
6,888,929 B1 5/2005 Saylor
6,893,347 B1 5/2005 Zilliacus et al.
6,898,762 B2 5/2005 Ellis et al.
6,899,628 B2 5/2005 Leen et al.
6,903,681 B2 6/2005 Faris
6,908,389 B1 6/2005 Puskala
6,942,574 B1 9/2005 LeMay et al.
6,944,228 B1 9/2005 Dakss et al.
6,960,088 B1 11/2005 Long
6,978,053 B1 12/2005 Sarachik et al.
7,001,279 B1 2/2006 Barber et al.
7,029,394 B2 4/2006 Leen et al.
7,035,626 B1 4/2006 Luciano, Jr.
7,035,653 B2 4/2006 Simon et al.
7,058,592 B1 6/2006 Heckerman et al.
7,076,434 B1 7/2006 Newman et al.
7,085,552 B2 8/2006 Buckley
7,116,310 B1 10/2006 Evans et al.
7,117,517 B1 10/2006 Milazzo et al.
7,120,924 B1 10/2006 Katcher et al.
7,124,410 B2 10/2006 Berg
7,125,336 B2 10/2006 Anttila et al.
7,136,871 B2 11/2006 Ozer et al.
7,144,011 B2 12/2006 Asher et al.
7,169,050 B1 1/2007 Tyler
7,185,355 B1 2/2007 Ellis
7,187,658 B2 3/2007 Koyanagi
7,191,447 B1 3/2007 Ellis et al.
7,192,352 B2 3/2007 Walker et al.
7,194,758 B1 3/2007 Waki et al.
7,228,349 B2 6/2007 Barone, Jr. et al.
7,231,630 B2 6/2007 Acott et al.
7,233,922 B2 6/2007 Asher et al.
7,240,093 B1 7/2007 Danieli et al.
7,244,181 B2 7/2007 Wang et al.
7,249,367 B2 7/2007 Bove, Jr. et al.
7,254,605 B1 8/2007 Strum
7,260,782 B2 8/2007 Wallace et al.
RE39,818 E 9/2007 Slifer
7,283,830 B2 10/2007 Buckley
7,288,027 B2 10/2007 Overton
7,341,517 B2 3/2008 Asher et al.
7,343,617 B1 3/2008 Kartcher et al.
7,347,781 B2 3/2008 Schultz
7,351,149 B1 4/2008 Simon et al.
7,367,042 B1 4/2008 Dakss et al.
7,379,705 B1 5/2008 Rados et al.
7,389,144 B1 6/2008 Osorio
7,430,718 B2 9/2008 Gariepy-Viles
7,452,273 B2 11/2008 Amaitis et al.
7,460,037 B2 12/2008 Cattone et al.
7,461,067 B2 12/2008 Dewing et al.
7,502,610 B2 3/2009 Maher
7,510,474 B2 3/2009 Carter, Sr.
7,517,282 B1 4/2009 Pryor
7,534,169 B2 5/2009 Amaitis et al.
7,543,052 B1 6/2009 Cesa Klein
7,562,134 B1 7/2009 Fingerhut et al.
7,602,808 B2 10/2009 Ullmann
7,610,330 B1 10/2009 Quinn
7,614,944 B1 11/2009 Hughes et al.
7,630,986 B1 12/2009 Herz et al.
7,693,781 B2 4/2010 Asher et al.
7,699,707 B2 4/2010 Bahou
7,702,723 B2 4/2010 Dyl
7,711,628 B2 5/2010 Davie et al.
7,729,286 B2 6/2010 Mishra
7,753,772 B1 7/2010 Walker
7,753,789 B2 7/2010 Walker et al.
7,780,528 B2 8/2010 Hirayama
7,828,661 B1 11/2010 Fish
7,835,961 B2 11/2010 Davie et al.
7,860,993 B2 12/2010 Chintala
7,886,003 B2 2/2011 Newman
7,907,211 B2 3/2011 Oostveen et al.
7,907,598 B2 3/2011 Anisimov
7,909,332 B2 3/2011 Root
7,925,756 B1 4/2011 Riddle
7,926,810 B2 4/2011 Fisher et al.
7,937,318 B2 5/2011 Davie et al.
7,941,482 B2 5/2011 Bates
7,941,804 B1 5/2011 Herington
7,976,389 B2 7/2011 Cannon et al.
8,002,618 B1 8/2011 Lockton
8,006,314 B2 8/2011 Wold
8,025,565 B2 9/2011 Leen et al.
8,028,315 B1 9/2011 Barber
8,082,150 B2 12/2011 Wold
8,086,445 B2 12/2011 Wold et al.
8,086,510 B2 12/2011 Amaitis et al.
8,092,303 B2 1/2012 Amaitis et al.
8,092,306 B2 1/2012 Root
8,105,141 B2 1/2012 Leen et al.
8,107,674 B2 1/2012 Davis et al.
8,109,827 B2 2/2012 Cahill et al.
8,128,474 B2 3/2012 Amaitis et al.
8,147,313 B2 4/2012 Amaitis et al.
8,147,373 B2 4/2012 Amaitis et al.
8,149,530 B1 4/2012 Lockton et al.
8,155,637 B2 4/2012 Fujisawa
8,162,759 B2 4/2012 Yamaguchi
8,176,518 B1 5/2012 Junkin et al.
8,186,682 B2 5/2012 Amaitis et al.
8,204,808 B2 6/2012 Amaitis et al.
8,219,617 B2 7/2012 Ashida
8,240,669 B2 8/2012 Asher et al.
8,246,048 B2 8/2012 Amaitis et al.
8,267,403 B2 9/2012 Fisher et al.
8,342,924 B2 1/2013 Leen et al.
8,342,942 B2 1/2013 Amaitis et al.
8,353,763 B2 1/2013 Amaitis et al.
8,376,855 B2 2/2013 Lockton et al.
8,396,001 B2 3/2013 Jung
8,397,257 B1 3/2013 Barber
8,465,021 B2 6/2013 Asher et al.
8,473,393 B2 6/2013 Davie et al.
8,474,819 B2 7/2013 Asher et al.
8,535,138 B2 9/2013 Amaitis et al.
8,538,563 B1 9/2013 Barber
8,543,487 B2 9/2013 Asher et al.
8,555,313 B2 10/2013 Newman
8,556,691 B2 10/2013 Leen et al.
8,585,490 B2 11/2013 Amaitis et al.
8,622,798 B2 1/2014 Lockton et al.
8,632,392 B2 1/2014 Shore et al.
8,634,943 B2 1/2014 Root
8,638,517 B2 1/2014 Lockton et al.

(56) **References Cited**

U.S. PATENT DOCUMENTS

8,641,511 B2 2/2014 Ginsberg et al.
8,659,848 B2 2/2014 Lockton et al.
8,672,751 B2 3/2014 Leen et al.
8,699,168 B2 4/2014 Lockton et al.
8,705,195 B2 4/2014 Lockton
8,708,789 B2 4/2014 Asher et al.
8,717,701 B2 5/2014 Lockton et al.
8,727,352 B2 5/2014 Amaitis et al.
8,734,227 B2 5/2014 Leen et al.
8,737,004 B2 5/2014 Lockton et al.
8,738,694 B2 5/2014 Huske et al.
8,771,058 B2 7/2014 Alderucci et al.
8,780,482 B2 7/2014 Lockton et al.
8,805,732 B2 8/2014 Davie et al.
8,813,112 B1 8/2014 Cibula et al.
8,814,664 B2 8/2014 Amaitis et al.
8,817,408 B2 8/2014 Lockton et al.
8,837,072 B2 9/2014 Lockton et al.
8,849,225 B1 9/2014 Choti
8,849,255 B2 9/2014 Choti
8,858,313 B1 10/2014 Selfors
8,870,639 B2 10/2014 Lockton et al.
8,935,715 B2 1/2015 Cibula et al.
9,056,251 B2 6/2015 Lockton
9,067,143 B2 6/2015 Lockton et al.
9,069,651 B2 6/2015 Barber
9,076,303 B1 7/2015 Park
9,098,883 B2 8/2015 Asher et al.
9,111,417 B2 8/2015 Leen et al.
9,205,339 B2 12/2015 Cibula et al.
9,233,293 B2 1/2016 Lockton
9,258,601 B2 2/2016 Lockton et al.
9,270,789 B2 2/2016 Huske et al.
9,289,692 B2 3/2016 Barber
9,306,952 B2 4/2016 Burman et al.
9,314,686 B2 4/2016 Lockton
9,314,701 B2 4/2016 Lockton et al.
9,355,518 B2 5/2016 Amaitis et al.
9,406,189 B2 8/2016 Scott et al.
9,430,901 B2 8/2016 Amaitis et al.
9,457,272 B2 10/2016 Lockton et al.
9,498,724 B2 11/2016 Lockton et al.
9,501,904 B2 11/2016 Lockton
9,504,922 B2 11/2016 Lockton et al.
9,511,287 B2 12/2016 Lockton et al.
9,526,991 B2 12/2016 Lockton et al.
9,536,396 B2 1/2017 Amaitis et al.
9,556,991 B2 1/2017 Furuya
9,604,140 B2 3/2017 Lockton et al.
9,652,937 B2 5/2017 Lockton
9,662,576 B2 5/2017 Lockton et al.
9,662,577 B2 5/2017 Lockton et al.
9,672,692 B2 6/2017 Lockton
9,687,738 B2 6/2017 Lockton et al.
9,687,739 B2 6/2017 Lockton et al.
9,707,482 B2 7/2017 Lockton et al.
9,716,918 B1 7/2017 Lockton et al.
9,724,603 B2 8/2017 Lockton et al.
9,744,453 B2 8/2017 Lockton et al.
9,805,549 B2 10/2017 Asher et al.
9,821,233 B2 11/2017 Lockton et al.
9,878,243 B2 1/2018 Lockton et al.
9,881,337 B2 1/2018 Jaycob et al.
9,901,820 B2 2/2018 Lockton et al.
9,908,053 B2 3/2018 Lockton et al.
9,919,210 B2 3/2018 Lockton
9,919,211 B2 3/2018 Lockton et al.
9,919,221 B2 3/2018 Lockton et al.
9,978,217 B2 5/2018 Lockton
9,993,730 B2 6/2018 Lockton et al.
9,999,834 B2 6/2018 Lockton et al.
10,052,557 B2 8/2018 Lockton et al.
10,089,815 B2 10/2018 Asher et al.
10,096,210 B2 10/2018 Amaitis et al.
10,137,369 B2 11/2018 Lockton et al.
10,150,031 B2 12/2018 Lockton et al.
10,165,339 B2 12/2018 Huske et al.
10,186,116 B2 1/2019 Lockton
10,195,526 B2 2/2019 Lockton et al.
10,226,698 B1 3/2019 Lockton et al.
10,226,705 B2 3/2019 Lockton et al.
10,232,270 B2 3/2019 Lockton et al.
10,248,290 B2 4/2019 Galfond
10,279,253 B2 5/2019 Lockton
10,360,767 B2 7/2019 Russell et al.
10,569,175 B2 2/2020 Kosai et al.
10,653,955 B2 5/2020 Lockton
10,695,672 B2 6/2020 Lockton et al.
10,709,987 B2 7/2020 Lockton et al.
10,721,543 B2 7/2020 Huske et al.
10,981,070 B2 4/2021 Isgreen
2001/0004609 A1 6/2001 Walker et al.
2001/0005670 A1 6/2001 Lahtinen
2001/0013067 A1 8/2001 Koyanagi
2001/0013125 A1 8/2001 Kitsukawa et al.
2001/0020298 A1 9/2001 Rector, Jr. et al.
2001/0032333 A1 10/2001 Flickinger
2001/0036272 A1 11/2001 Hirayama
2001/0036853 A1 11/2001 Thomas
2001/0044339 A1 11/2001 Cordero
2001/0054019 A1 12/2001 de Fabrega
2002/0010789 A1 1/2002 Lord
2002/0018477 A1 2/2002 Katz
2002/0026321 A1 2/2002 Faris
2002/0029381 A1 3/2002 Inselberg
2002/0035609 A1 3/2002 Lessard
2002/0037766 A1 3/2002 Muniz
2002/0069265 A1 3/2002 Bountour
2002/0042293 A1 4/2002 Ubale et al.
2002/0046099 A1 4/2002 Frengut et al.
2002/0054088 A1 5/2002 Tanskanen et al.
2002/0055385 A1 5/2002 Otsu
2002/0056089 A1 5/2002 Houston
2002/0059094 A1 5/2002 Hosea et al.
2002/0059623 A1 5/2002 Rodriguez et al.
2002/0069076 A1 6/2002 Faris
2002/0076084 A1 6/2002 Tian
2002/0078176 A1 6/2002 Nomura et al.
2002/0083461 A1 6/2002 Hutcheson
2002/0091833 A1 7/2002 Grimm
2002/0094869 A1 7/2002 Harkham
2002/0095333 A1 7/2002 Jokinen et al.
2002/0097983 A1 7/2002 Wallace et al.
2002/0099709 A1 7/2002 Wallace
2002/0100063 A1 7/2002 Herigstad et al.
2002/0103696 A1 8/2002 Huang et al.
2002/0105535 A1 8/2002 Wallace et al.
2002/0107073 A1 8/2002 Binney
2002/0108112 A1 8/2002 Wallace et al.
2002/0108125 A1 8/2002 Joao
2002/0108127 A1 8/2002 Lew et al.
2002/0112249 A1 8/2002 Hendricks et al.
2002/0115488 A1 8/2002 Berry et al.
2002/0119821 A1 8/2002 Sen
2002/0120930 A1 8/2002 Yona
2002/0124247 A1 9/2002 Houghton
2002/0132614 A1 9/2002 Vanlujit et al.
2002/0133817 A1 9/2002 Markel
2002/0133827 A1 9/2002 Newman et al.
2002/0142843 A1 10/2002 Roelofs
2002/0144273 A1 10/2002 Reto
2002/0147049 A1 10/2002 Carter, Sr.
2002/0157002 A1 10/2002 Messerges et al.
2002/0157005 A1 10/2002 Bunk
2002/0159576 A1 10/2002 Adams
2002/0162031 A1 10/2002 Levin et al.
2002/0162117 A1 10/2002 Pearson
2002/0165020 A1 11/2002 Koyama
2002/0165025 A1 11/2002 Kawahara
2002/0177483 A1 11/2002 Cannon
2002/0184624 A1 12/2002 Spencer
2002/0187825 A1 12/2002 Tracy
2002/0198050 A1 12/2002 Patchen
2003/0002638 A1 1/2003 Kaars

(56) **References Cited**

U.S. PATENT DOCUMENTS

2003/0003997 A1 1/2003 Vuong et al.
2003/0013528 A1 1/2003 Allibhoy et al.
2003/0023547 A1 1/2003 France
2003/0040363 A1 2/2003 Sandberg
2003/0054885 A1 3/2003 Pinto et al.
2003/0060247 A1 3/2003 Goldberg et al.
2003/0066089 A1 4/2003 Anderson
2003/0069828 A1 4/2003 Blazey et al.
2003/0070174 A1 4/2003 Solomon
2003/0078924 A1 4/2003 Liechty et al.
2003/0086691 A1 5/2003 Yu
2003/0087652 A1 5/2003 Simon et al.
2003/0088648 A1 5/2003 Bellaton
2003/0114224 A1 6/2003 Anttila et al.
2003/0115152 A1 6/2003 Flaherty
2003/0125109 A1 7/2003 Green
2003/0134678 A1 7/2003 Tanaka
2003/0144017 A1 7/2003 Inselberg
2003/0154242 A1 8/2003 Hayes et al.
2003/0165241 A1 9/2003 Fransdonk
2003/0177167 A1 9/2003 Lafage et al.
2003/0177504 A1 9/2003 Paulo et al.
2003/0189668 A1 10/2003 Newman et al.
2003/0195023 A1 10/2003 Di Cesare
2003/0195807 A1 10/2003 Maggio
2003/0208579 A1 11/2003 Brady et al.
2003/0211856 A1 11/2003 Zilliacus
2003/0212691 A1 11/2003 Kuntala et al.
2003/0216185 A1 11/2003 Varley
2003/0216857 A1 11/2003 Feldman et al.
2003/0228866 A1 12/2003 Pezeshki
2003/0233425 A1 12/2003 Lyons et al.
2004/0005919 A1 1/2004 Walker et al.
2004/0014524 A1 1/2004 Pearlman
2004/0015442 A1 1/2004 Hmlinen
2004/0022366 A1 2/2004 Ferguson et al.
2004/0025190 A1 2/2004 McCalla
2004/0056897 A1 3/2004 Ueda
2004/0060063 A1 3/2004 Russ et al.
2004/0073915 A1 4/2004 Dureau
2004/0088729 A1 5/2004 Petrovic et al.
2004/0093302 A1 5/2004 Baker et al.
2004/0152454 A1 5/2004 Kauppinen
2004/0107138 A1 6/2004 Maggio
2004/0117831 A1 6/2004 Ellis et al.
2004/0117839 A1 6/2004 Watson et al.
2004/0125877 A1 7/2004 Chang
2004/0128319 A1 7/2004 Davis et al.
2004/0139158 A1 7/2004 Datta
2004/0139482 A1 7/2004 Hale
2004/0148638 A1 7/2004 Weisman et al.
2004/0152517 A1 8/2004 Haedisty
2004/0152519 A1 8/2004 Wang
2004/0158855 A1 8/2004 Gu et al.
2004/0162124 A1 8/2004 Barton et al.
2004/0166873 A1 8/2004 Simic
2004/0176162 A1 9/2004 Rothschild
2004/0178923 A1 9/2004 Kuang
2004/0183824 A1 9/2004 Benson
2004/0185881 A1 9/2004 Lee
2004/0190779 A1 9/2004 Sarachik et al.
2004/0198495 A1 10/2004 Cisneros et al.
2004/0201626 A1 10/2004 Lavoie
2004/0203667 A1 10/2004 Shroder
2004/0203898 A1 10/2004 Bodin et al.
2004/0210507 A1 10/2004 Asher et al.
2004/0215756 A1 10/2004 VanAntwerp
2004/0216161 A1 10/2004 Barone, Jr. et al.
2004/0216171 A1 10/2004 Barone, Jr. et al.
2004/0224750 A1 11/2004 Ai-Ziyoud
2004/0242321 A1 12/2004 Overton
2004/0266513 A1 12/2004 Odom
2005/0005303 A1 1/2005 Barone, Jr. et al.
2005/0021942 A1 1/2005 Diehl et al.
2005/0026699 A1 2/2005 Kinzer et al.
2005/0028208 A1 2/2005 Ellis
2005/0043094 A1 2/2005 Nguyen et al.
2005/0076371 A1 4/2005 Nakamura
2005/0077997 A1 4/2005 Landram
2005/0060219 A1 5/2005 Ditering et al.
2005/0097599 A1 5/2005 Potnick et al.
2005/0101309 A1 5/2005 Croome
2005/0113164 A1 5/2005 Buecheler et al.
2005/0003878 A1 6/2005 Updike
2005/0131984 A1 6/2005 Hofmann et al.
2005/0138668 A1 6/2005 Gray et al.
2005/0144102 A1 6/2005 Johnson
2005/0155083 A1 7/2005 Oh
2005/0177861 A1 8/2005 Ma et al.
2005/0210526 A1 9/2005 Levy et al.
2005/0216838 A1 9/2005 Graham
2005/0235043 A1 10/2005 Teodosiu et al.
2005/0239551 A1 10/2005 Griswold
2005/0255901 A1 11/2005 Kreutzer
2005/0256895 A1 11/2005 Dussault
2005/0266869 A1 12/2005 Jung
2005/0267969 A1 12/2005 Poikselka et al.
2005/0273804 A1 12/2005 Preisman
2005/0283800 A1 12/2005 Ellis et al.
2005/0288080 A1 12/2005 Lockton et al.
2005/0288101 A1 12/2005 Lockton et al.
2005/0288812 A1 12/2005 Cheng
2006/0020700 A1 1/2006 Qiu
2006/0025070 A1 2/2006 Kim et al.
2006/0046810 A1 3/2006 Tabata
2006/0047772 A1 3/2006 Crutcher
2006/0053390 A1 3/2006 Gariepy-Viles
2006/0058103 A1 3/2006 Danieli
2006/0059161 A1 3/2006 Millett et al.
2006/0063590 A1 3/2006 Abassi et al.
2006/0082068 A1 4/2006 Patchen
2006/0087585 A1 4/2006 Seo
2006/0089199 A1 4/2006 Jordan et al.
2006/0094409 A1 5/2006 Inselberg
2006/0101492 A1 5/2006 Lowcock
2006/0111168 A1 5/2006 Nguyen
2006/0135253 A1 6/2006 George et al.
2006/0148569 A1 7/2006 Beck
2006/0156371 A1 7/2006 Maetz et al.
2006/0160597 A1* 7/2006 Wright G07F 17/32 463/16
2006/0174307 A1 8/2006 Hwang et al.
2006/0183547 A1 8/2006 McMonigle
2006/0183548 A1 8/2006 Morris et al.
2006/0190654 A1 8/2006 Joy
2006/0205483 A1 9/2006 Meyer et al.
2006/0205509 A1 9/2006 Hirota
2006/0205510 A1 9/2006 Lauper
2006/0217198 A1 9/2006 Johnson
2006/0236352 A1 10/2006 Scott, III
2006/0248553 A1 11/2006 Mikkelson et al.
2006/0248564 A1 11/2006 Zinevitch
2006/0256865 A1 11/2006 Westerman
2006/0256868 A1 11/2006 Westerman
2006/0269120 A1 11/2006 Mehmadi et al.
2006/0285586 A1 12/2006 Westerman
2007/0004516 A1 1/2007 Jordan et al.
2007/0013547 A1 1/2007 Boaz
2007/0019826 A1 1/2007 Horbach et al.
2007/0028272 A1 2/2007 Lockton
2007/0037623 A1 2/2007 Romik
2007/0054695 A1 3/2007 Huske et al.
2007/0078009 A1 4/2007 Lockton et al.
2007/0083920 A1 4/2007 Mizoguchi et al.
2007/0086465 A1 4/2007 Paila et al.
2007/0087832 A1 4/2007 Abbott
2007/0093296 A1 4/2007 Asher
2007/0101358 A1 5/2007 Ambady
2007/0106721 A1 5/2007 Schloter
2007/0107010 A1 5/2007 Jolna et al.
2007/0129144 A1 6/2007 Katz
2007/0147870 A1 7/2007 Nagashima et al.
2007/0162328 A1 7/2007 Reich
2007/0183744 A1 8/2007 Koizumi

(56) **References Cited**

U.S. PATENT DOCUMENTS

2007/0197247 A1 8/2007 Inselberg
2007/0210908 A1 9/2007 Putterman et al.
2007/0219856 A1 9/2007 Ahmad-Taylor
2007/0222652 A1 9/2007 Cattone et al.
2007/0226062 A1 9/2007 Hughes et al.
2007/0238525 A1 10/2007 Suomela
2007/0243936 A1 10/2007 Binenstock et al.
2007/0244570 A1 10/2007 Speiser et al.
2007/0244585 A1 10/2007 Speiser et al.
2007/0244749 A1 10/2007 Speiser et al.
2007/0265089 A1 11/2007 Robarts
2007/0294410 A1 12/2007 Pandya
2008/0005037 A1 1/2008 Hammad
2008/0013927 A1 1/2008 Kelly et al.
2008/0051201 A1 2/2008 Lore
2008/0066129 A1 3/2008 Katcher et al.
2008/0076497 A1 3/2008 Kiskis et al.
2008/0104630 A1 5/2008 Bruce
2008/0146337 A1 6/2008 Halonen
2008/0169605 A1 7/2008 Shuster et al.
2008/0222672 A1 9/2008 Piesing
2008/0240681 A1 10/2008 Fukushima
2008/0248865 A1 10/2008 Tedesco
2008/0270288 A1 10/2008 Butterly et al.
2008/0288600 A1 11/2008 Clark
2009/0011781 A1 1/2009 Merrill et al.
2009/0094632 A1 4/2009 Newman et al.
2009/0103892 A1 4/2009 Hirayama
2009/0186676 A1 7/2009 Amaitis et al.
2009/0163271 A1 9/2009 George et al.
2009/0228351 A1 9/2009 Rijsenbrij
2009/0234674 A1 9/2009 Wurster
2009/0264188 A1 10/2009 Soukup
2009/0271512 A1 10/2009 Jorgensen
2009/0325716 A1 12/2009 Harari
2010/0099421 A1 4/2010 Patel et al.
2010/0099471 A1 4/2010 Feeney et al.
2010/0107194 A1 4/2010 McKissick et al.
2010/0120503 A1 5/2010 Hoffman et al.
2010/0137057 A1 6/2010 Fleming
2010/0203936 A1 8/2010 Levy
2010/0279764 A1 11/2010 Allen et al.
2010/0296511 A1 11/2010 Prodan
2011/0016224 A1 1/2011 Riley
2011/0053681 A1 3/2011 Goldman
2011/0065490 A1 3/2011 Lutnick
2011/0081958 A1 4/2011 Herman
2011/0116461 A1 5/2011 Holt
2011/0130197 A1 6/2011 Bythar et al.
2011/0227287 A1 9/2011 Reabe
2011/0269548 A1 11/2011 Barclay et al.
2011/0306428 A1 12/2011 Lockton et al.
2012/0058808 A1 3/2012 Lockton
2012/0115585 A1 5/2012 Goldman
2012/0157178 A1 6/2012 Lockton
2012/0264496 A1 10/2012 Behrman et al.
2012/0282995 A1 11/2012 Allen et al.
2012/0295686 A1 11/2012 Lockton
2013/0005453 A1 1/2013 Nguyen et al.
2013/0072271 A1 3/2013 Lockton et al.
2013/0079081 A1 3/2013 Lockton et al.
2013/0079092 A1 3/2013 Lockton et al.
2013/0079093 A1 3/2013 Lockton et al.
2013/0079135 A1 3/2013 Lockton et al.
2013/0079150 A1 3/2013 Lockton et al.
2013/0079151 A1 3/2013 Lockton et al.
2013/0196774 A1 8/2013 Lockton et al.
2013/0225285 A1 8/2013 Lockton
2013/0225299 A1 8/2013 Lockton
2014/0031134 A1 1/2014 Lockton et al.
2014/0100011 A1 4/2014 Gingher
2014/0106832 A1 4/2014 Lockton et al.
2014/0128139 A1 5/2014 Shuster et al.
2014/0155130 A1 6/2014 Lockton et al.
2014/0155134 A1 6/2014 Lockton
2014/0206446 A1 7/2014 Lockton et al.
2014/0237025 A1 8/2014 Huske et al.
2014/0248952 A1 9/2014 Cibula et al.
2014/0256432 A1 9/2014 Lockton et al.
2014/0279439 A1 9/2014 Brown
2014/0287832 A1 9/2014 Lockton et al.
2014/0309001 A1 10/2014 Root
2014/0335961 A1 11/2014 Lockton et al.
2014/0335962 A1 11/2014 Lockton et al.
2014/0378212 A1 12/2014 Sims
2015/0011310 A1 1/2015 Lockton et al.
2015/0024814 A1 1/2015 Root
2015/0067732 A1 3/2015 Howe et al.
2015/0148130 A1 5/2015 Cibula et al.
2015/0238839 A1 8/2015 Lockton
2015/0238873 A1 8/2015 Arnone et al.
2015/0258452 A1* 9/2015 Lockton A63F 13/537 463/7
2015/0356831 A1 12/2015 Osibodu
2016/0023116 A1 1/2016 Wire
2016/0045824 A1 2/2016 Lockton et al.
2016/0049049 A1* 2/2016 Lockton A63F 13/795 463/11
2016/0054872 A1 2/2016 Cibula et al.
2016/0082357 A1 3/2016 Lockton
2016/0121208 A1 5/2016 Lockton et al.
2016/0134947 A1 5/2016 Huske et al.
2016/0217653 A1 7/2016 Meyer
2016/0271501 A1 9/2016 Balsbaugh
2016/0361647 A1 12/2016 Lockton et al.
2016/0375362 A1 12/2016 Lockton et al.
2017/0036110 A1 2/2017 Lockton et al.
2017/0036117 A1 2/2017 Lockton et al.
2017/0043259 A1 2/2017 Lockton et al.
2017/0053498 A1 2/2017 Lockton
2017/0065891 A1 3/2017 Lockton et al.
2017/0098348 A1 4/2017 Odom
2017/0103615 A1 4/2017 Theodospoulos
2017/0128840 A1 5/2017 Croci
2017/0221314 A1 8/2017 Lockton
2017/0225071 A1 8/2017 Lockton et al.
2017/0225072 A1 8/2017 Lockton et al.
2017/0232340 A1 8/2017 Lockton
2017/0243438 A1 8/2017 Merati
2017/0249801 A1 8/2017 Malek
2017/0252649 A1 9/2017 Lockton et al.
2017/0259173 A1 9/2017 Lockton et al.
2017/0264961 A1 9/2017 Lockton
2017/0282067 A1 10/2017 Lockton et al.
2017/0296916 A1 10/2017 Lockton et al.
2017/0304726 A1 10/2017 Lockton et al.
2017/0345260 A1 11/2017 Strause
2018/0025586 A1 1/2018 Lockton
2018/0071637 A1 3/2018 Baazov
2018/0104582 A1 4/2018 Lockton et al.
2018/0104596 A1 4/2018 Lockton et al.
2018/0117464 A1 5/2018 Lockton et al.
2018/0140955 A1 5/2018 Lockton et al.
2018/0154255 A1 6/2018 Lockton
2018/0169523 A1 6/2018 Lockton et al.
2018/0190077 A1 7/2018 Hall
2018/0236359 A1 8/2018 Lockton et al.
2018/0243652 A1 8/2018 Lockton et al.
2018/0264360 A1 9/2018 Lockton et al.
2018/0300988 A1 10/2018 Lockton
2018/0318710 A1 11/2018 Lockton et al.
2019/0054375 A1 2/2019 Lockton et al.
2019/0060750 A1 2/2019 Lockton et al.
2019/0143225 A1* 5/2019 Baazov A63F 13/35 463/25

FOREIGN PATENT DOCUMENTS

CA 2279069 7/1999
CA 2287617 10/1999
EP 0649102 A3 6/1996
GB 2364485 1/2002
JP 11-46356 2/1999
JP 11-239183 8/1999

(56) **References Cited**

FOREIGN PATENT DOCUMENTS

JP	2000-165840		6/2000
JP	2000-217094		8/2000
JP	2000-358255		12/2000
JP	2001-28743		1/2001
JP	2000-209563		7/2008
NZ	330242		10/1989
WO	01/039506	A2	5/2001
WO	01/65743	A1	9/2001
WO	02/03698	A1	10/2002
WO	2005064506	A1	7/2005
WO	2006004855		1/2006
WO	2006004856		1/2006
WO	2007002284		1/2007
WO	2007016575		2/2007
WO	2007041667		4/2007
WO	2008027811	A2	3/2008
WO	2008115858	A1	9/2008

OTHER PUBLICATIONS

Ark 4.0 Standard Edition, Technical Overview www.twowaytv.com/version4/technologies/tech_ark_professionals.asp.

"Understanding the Interactivity Between Television and Mobile commerce", Robert Davis and David Yung, Communications of the ACM, Jul. 2005, vol. 48, No. 7, pp. 103-105.

"Re: Multicast Based Voting System" www.ripe.net/ripe/maillists/archives/mbone-eu-op/1997/msg00100html.

"IST and Sportal.com: Live on the Internet Sep. 14, 2004 by Clare Spoonheim", www.isk.co.usk/NEWS/dotcom/ist_sportal.html.

"Modeling User Behavior in Networked Games byTristan Henderson and Saleem Bhatti", www.woodworm.cs.uml.edu/rprice/ep/henderson.

"SMS Based Voting and Survey System for Meetings", www.abbit.be/technology/SMSSURVEY.html.

"PurpleAce Launches 3GSM Ringtone Competition", www.wirelessdevnet.com/news/2005/jan/31/news6html.

"On the Perfomance of Protocols for collecting Responses over a Multiple-Access Channel", Mostafa H. Ammar and George N. Rouskas, IEEE INCOMFORM '91, pp. 1490-1499, vol. 3, IEEE, New York, NY.

Merriam-Webster, "Game" definition, <http://www.merriam-webster.com/dictionary/agme.pg.1.

Ducheneaut et al., "The Social Side of Gaming: A Study of Interaction Patterns in a Massively Multiplayer Online Game", Palo Alto Research Center, Nov. 2004, vol. 6, Issue 4, pp. 360-369.

http://help.yahoo.com/help/us/tourn/tourn-03.html.

International Preliminary Report dated Apr. 22, 2021 for the application PCT/US2019/054859.

Pinnacle, "The basics of reverse line movement," Jan. 19, 2018, Retrieved on Jan. 22, 2020 , http://www.pinnacle.com/en/betting-articles educational/basics-of-reverse-line-movement/QAH26XGGQQS7M3GD.

Gambling Commission,"Virtual currencies, eSports and social casino gaming-position paper," Mar. 2017, Retrieved on Jan. 22, 2020, http://gamblingcomission.gov.uk/PDF/Virtual-currencies-eSports-and-social-casino-gaming.pdf.

Sipko et al.,"Machine learning for the prediction of professional tennis matches," In: MEng computing-final year project, Imperial College London, Jun. 15, 2015, http://www.doc.ic.ac.uk/teaching/distinguished-projects/2015/m.sipko.pdf.

WinView Game Producer, "Live TV Sports Play Along App WinView Games Announces Sponsorship With PepsiCo to Start This Holiday Season," In Winview Games. Dec. 21, 2016, Retrieved on Jan. 21, 2020 from , http://www. winviewgames./press-release/live-tv-sports-play-along-app-winview-games-announces-sponsorship-pepsico-start-holiday-season/.

International Search Report and the Written Opinion for the PCT/US2019/054859 dated Feb. 4, 2020.

Fantasy sport-Wikipedia.pdf, https://en.wikepedia.org/w/index.php?title=Fantasy_sport&oldid=685260969(Year:2015).

* cited by examiner

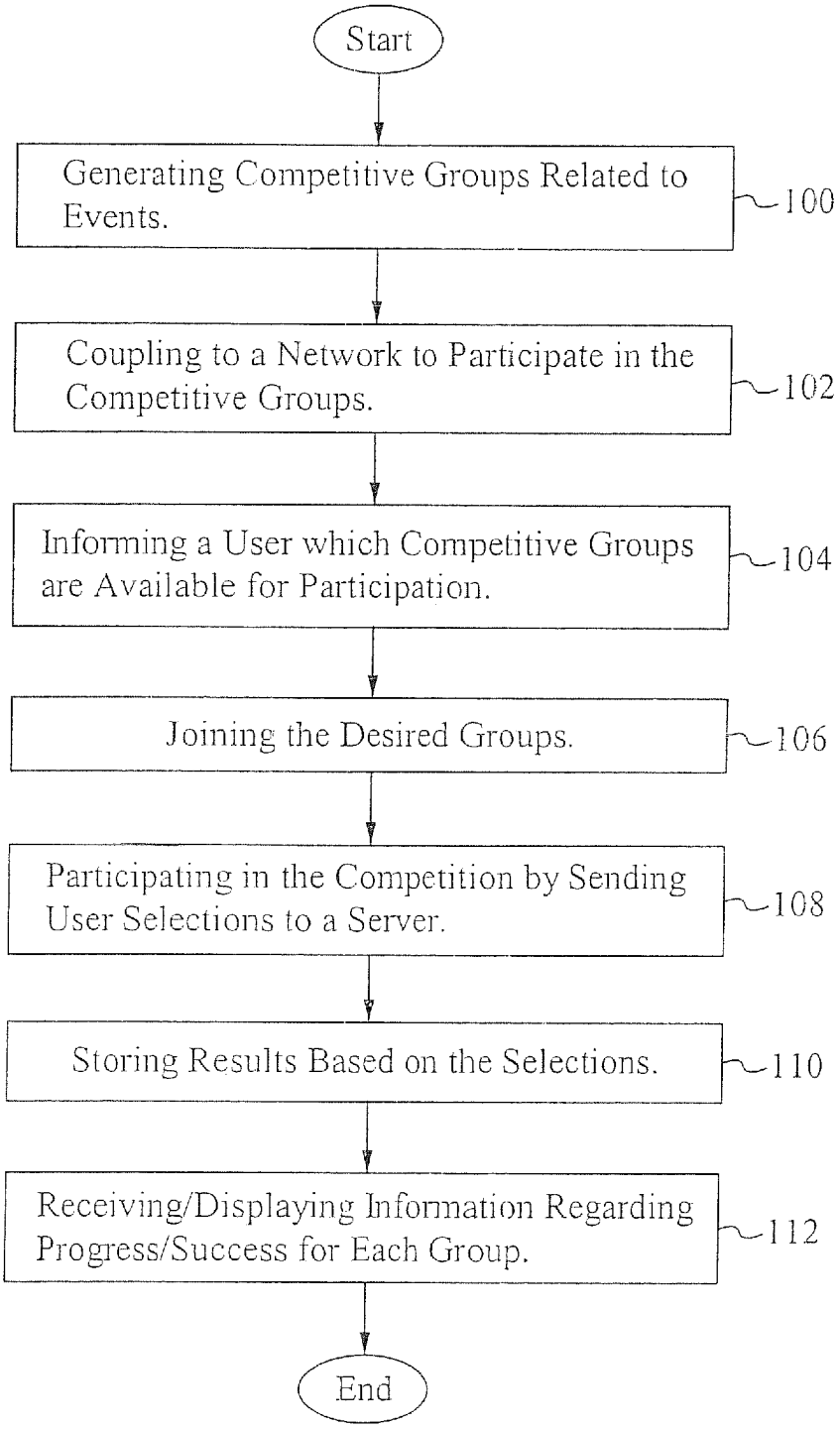

Start
Generating Competitive Groups Related to Events.
100
Coupling to a Network to Participate in the Competitive Groups.
102
Informing a User which Competitive Groups are Available for Participation.
104
Joining the Desired Groups.
106
Participating in the Competition by Sending User Selections to a Server.
108
Storing Results Based on the Selections.
110
Receiving/Displaying Information Regarding Progress/Success for Each Group.
112
End

Fig. 1

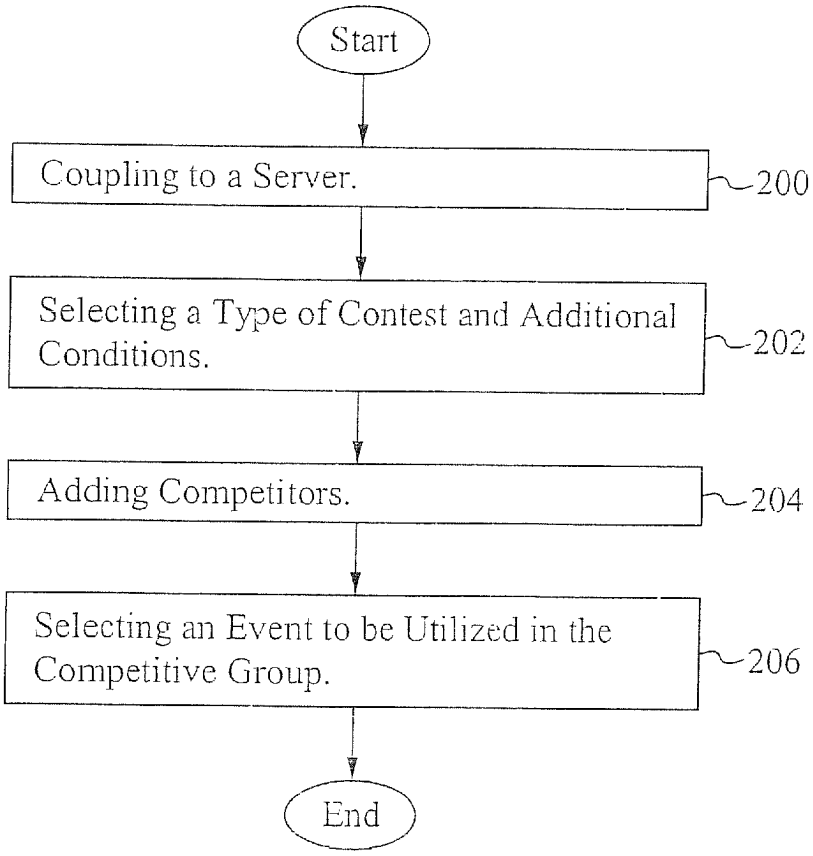

Start
Coupling to a Server.
200
Selecting a Type of Contest and Additional Conditions.
202
Adding Competitors.
204
Selecting an Event to be Utilized in the Competitive Group.
206
End

Fig. 2

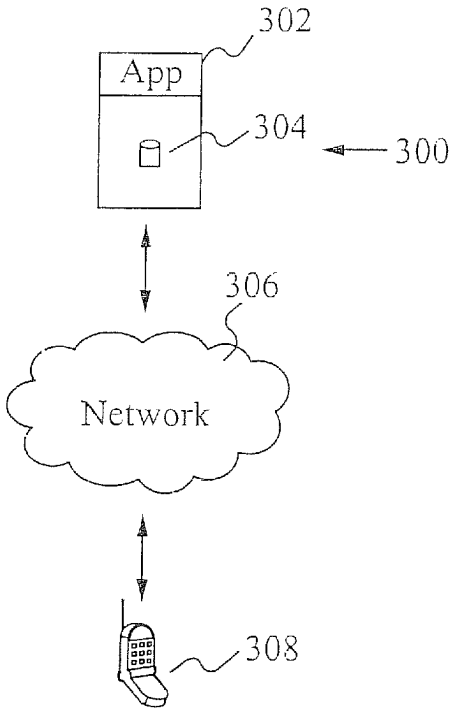

302
App
304
300
306
Network
308

Fig. 3

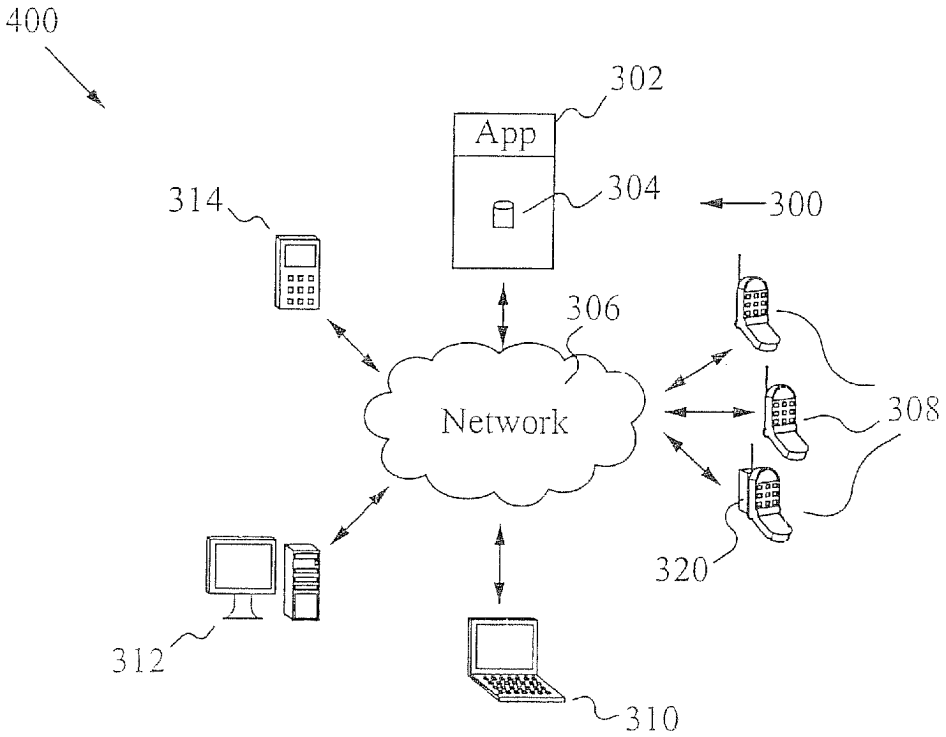

400
302
App
304
300
314
306
Network
308
320
312
310

Fig. 4

METHOD OF AND SYSTEM FOR CONDUCTING MULTIPLE CONTESTS OF SKILL WITH A SINGLE PERFORMANCE

RELATED APPLICATION(S)

This Patent Application is a continuation of co-pending U.S. patent application Ser. No. 16/221,307, filed Dec. 14, 2018, and titled "METHOD OF AND SYSTEM FOR CONDUCTING MULTIPLE CONTESTS OF SKILL WITH A SINGLE PERFORMANCE" which is a continuation of U.S. patent application Ser. No. 15/485,145, filed Apr. 11, 2017, and titled "METHOD OF AND SYSTEM FOR CONDUCTING MULTIPLE CONTESTS OF SKILL WITH A SINGLE PERFORMANCE" which is a continuation of U.S. patent application Ser. No. 14/927,227, filed Oct. 29, 2015, and titled "METHOD OF AND SYSTEM FOR CONDUCTING MULTIPLE CONTESTS OF SKILL WITH A SINGLE PERFORMANCE" which is a continuation of U.S. patent application Ser. No. 14/706,802, filed May 7, 2015, and titled "METHOD OF AND SYSTEM FOR CONDUCTING MULTIPLE CONTESTS OF SKILL WITH A SINGLE PERFORMANCE" which is a continuation of U.S. patent application Ser. No. 13/246,464, filed Sep. 27, 2011, and titled "METHOD OF AND SYSTEM FOR CONDUCTING MULTIPLE CONTESTS OF SKILL WITH A SINGLE PERFORMANCE" which is a continuation-in-part of U.S. patent application Ser. No. 13/215,052, filed Aug. 22, 2011, and titled "METHOD OF AND SYSTEM FOR CONDUCTING MULTIPLE CONTESTS OF SKILL WITH A SINGLE PERFORMANCE" which is a continuation of U.S. patent application Ser. No. 11/652,240, filed Jan. 10, 2007, and titled "METHOD OF AND SYSTEM FOR CONDUCTING MULTIPLE CONTESTS OF SKILL WITH A SINGLE PERFORMANCE" which claims priority under 35 U.S.C. § 119(e) of the, co-owned U.S. Provisional Patent Application No. 60/757,960, filed Jan. 10, 2006, and titled "METHODOLOGY FOR CONDUCTING MULTIPLE CONTESTS OF SKILL WITH A SINGLE PERFORMANCE," and which are all also hereby incorporated by reference in their entirety.

FIELD OF THE INVENTION

The present invention relates to the field of distributed gaming. More specifically, the present invention relates to the field of distributed gaming utilizing a mobile device.

BACKGROUND OF THE INVENTION

In the United States alone there are over 170 million registered cellular phones. With the expiration of the U.S. Pat. No. 4,592,546 to Fascenda and Lockton, companies are able to now use the cellular phone and other mobile communication devices utilizing a multicast network to control television viewers in games of skill based upon predicting, for example, what the quarterback may call on the next play within a football game. In addition, games of skill with a common start time can be conducted simultaneously among cellular phone owners, based on classic card, dice, trivia, and other games. In order to avoid the anti-gaming laws in the various states, the winners must be determined by the relative skill, experience and practice of the player in each discrete game.

U.S. Pat. No. 5,813,913 ('913) to Berner and Lockton provides for a central computing system which includes a means of grouping participants having similar skill levels together in simultaneous, but separate, levels of competition playing an identical game. The relative performances are communicated to only those participants competing at the same skill level. The '913 patent also provides for a wireless receiving device to permanently store the specific skill level for each participant for each type of common event such as those based on televised sports or game shows. The '913 patent provides for a telephonic link at the completion of the game to collect information and update the skill level of the participants of a particular game. When a person achieves sufficient points or meets other objective criteria to graduate into another skill level, a method is provided for accomplishing this in the central computer and then transmitting an alert to the participant notifying them of their promotion. The '913 patent describes awarding prizes and providing recognition for the members of each discreet skill level in a common game. All users, no matter what level they are on, receive the same number of questions and thus the possibility of earning the same number of points. Thus direct comparisons between users at different levels, although not encouraged are possible. Such comparisons between players of disparate skills can lead to user discouragement.

Games of skill and chance have an intrinsic excitement and entertainment value. Any game is greatly enhanced by a participant's ability to know how their performance compares in relation to other participants and/or to historical performance for the game throughout the contest. As with any game of skill, competition among friends, or with strangers of similar experience, or the ability at ones option, sometimes for an extra consideration, to compete in a separate team or individual contest, offers the opportunity of increased enjoyment and prizes.

SUMMARY OF THE INVENTION

A method of and system for conducting multiple competitions of skill for a single performance are described herein. User generated competition groups and system generated competition groups allow users to participate in multiple competitions at once based on answering the same questions or making the same selections related to a single event. The users are informed of the availability of each competition either via email, text message or when logging into the network via a website. The users select which competitions groups to join. After joining the desired groups, the users then make their selections related to the event which are transmitted to the network where results are tabulated and transmitted back to the users. The results are separated for each competition group, so that users continually know where they stand in each separate competition. With multiple competition groups, users are able to have varying success from the same performance in multiple competitions.

In one aspect, a method of participating in multiple contests of skill corresponding to an event programmed in a device. The method comprises receiving a list of competitive groups to join, selecting a plurality of competitive groups to join, participating with the plurality of competitive groups by sending selections related to the event to a server and receiving standings on a device from the server, wherein the standings are based on results from the selections. The event is selected from the group consisting of a television-based sporting event, an entertainment show, a game show, a reality show, a news show, and a commercial contained in a broadcast. The event comprises card, dice, trivia and word games played simultaneously. Receiving the standings on the device occurs during participating with the plurality of

competitive groups. The standings are separated based on the plurality of competitive groups. The standings are received periodically and represent relative performance in the separate competitive groups. The competitive groups are selected from the group consisting of service provider generated competitive groups and user generated competitive groups. The service provider generated competitive groups are based on general playing characteristics. The user generated competitive groups includes contacts on a social networking site. The list of competitive groups to join is received on the device selected from the group consisting of a cellular phone, a laptop computer, a personal computer, PDA and a tablet computer. The competitive groups are maintained in a database. In some embodiments, the results are adjusted using a handicap by providing additional points to users in lower level groups. In some embodiments, the method is implemented using HTML5 or a native application.

In another aspect, a method of conducting multiple contests of skill corresponding to an event programmed in a device. The method comprises generating separate competitive groups related to the event, coupling to a network to participate in the competitive groups, informing a user which of the competitive groups are available for the user to join, joining a selected number of the competitive groups, participating with the competitive groups by sending selections related to the event to a server within the network, storing results and standings on the server, wherein the standings are based on the results and the results are based on the selections and transmitting the standings to a device. A user pays a separate consideration to play in a contest of the multiple contests of skill through a micropayments system, where a prize is supplemented or funded by an entry fee or consideration paid by all who participate in a group. The method further comprises displaying the standings on the device. The server contains an application and a database for assisting in generating the competitive group. The application includes a graphical user interface. The device contains an application for assisting in generating the competitive group. Generating competitive groups related to the event further comprises coupling to the server, selecting a type of contest and additional conditions to be included in the competitive group, adding competitors to the competitive group and selecting the event for competition by the competitive group. The type of contest is selected from the group consisting of an open contest, a head-to-head contest and a team contest. Adding competitors to the competitive group includes identifying the competitors by an identifier selected from the group consisting of a username, an email address, a cellular phone number and a personal identifier. The method further comprises sending an invitation which informs the competitors of an opportunity to be included in the competitive group. The invitation is sent by a mechanism selected from the group consisting of an email, an SMS text message and a voice message. The event is selected from the group consisting of a television-based sporting event, an entertainment show, a game show, a reality show, a news show and a commercial contained in a broadcast. The event comprises card, dice, trivia and word games played simultaneously. Transmitting the standings occurs during participating with the competitive groups. The standings are separated based on the competitive groups. The standings are received periodically and represent performance within the competitive groups. The competitive groups are selected from the group consisting of service provider generated competitive groups and user generated competitive groups. The service provider generated competitive groups are based on general playing characteristics. The user generated competitive groups include contacts on a social networking site. The device is selected from the group consisting of a cellular phone, a laptop computer, a personal computer, PDA and a tablet computer. The competitive groups are maintained in a database. The results are adjusted using a handicap by providing additional points to users in lower level groups. In some embodiments, the method is implemented using HTML5 or a native application.

In another aspect, a server device for conducting multiple contests of skill corresponding to an event comprises a storage mechanism and an application for interacting with the storage mechanism to generate and store competitive groups which are used to compete in the multiple contests of skill, the application further for receiving selections related to the event, storing results and standings based on the selections, wherein the standings are based on the results and transmitting the standings to the device. The application is further for providing an interface for generating competitive groups related to the event. The event is selected from the group consisting of a television-based sporting event, an entertainment show, a game show, a reality show, a news show and a commercial contained in a broadcast. The event comprises card, dice, trivia and word games played simultaneously. The server device communicates data for generating the competitive groups, for selecting the competitive groups to join and for submitting the selections. The standings are transmitted periodically to the device and represent performance within the competitive groups. The standings are separated based on the competitive groups. A network identifies the competitive groups a user is eligible for. The server device further comprises a database stored on the server device for managing the selections, the results, the standings and the competitive groups. The results are adjusted using a handicap by providing additional points to users in lower level groups.

In yet another aspect, a device for participating in multiple contests of skill corresponding to an event comprises a communications module for coupling to a server and an application for utilizing the communications module for coupling to a server to communicate with the server to generate competitive groups which are used to compete in the multiple contests of skill. The application utilizes the communications module for coupling to the server to send selections to and receive standings from the server. The event is selected from the group consisting of a television-based sporting event, an entertainment show, a game show, a reality show, a news show and a commercial contained in a broadcast. The event comprises card, dice, trivia and word games played simultaneously. The competitive groups comprise user generated competitive groups including contacts on a social networking site. In some embodiments, the device and the server implement HTML5.

In another aspect, a method programmed in a memory of a device comprises generating a list of competitive groups to join and presenting the list of competitive groups to join, wherein the list of competitive groups are for participating in multiple contests of skill corresponding to an event. Users are provided a currency for watching the event or participating in the multiple contests of skill. The currency is redeemable for prizes or services. Each group pools the currency received by users and the currency is distributed to a member of each group. The member is chosen at random. The member is chosen based on skill. Participants in a group of the competitive groups pool sweepstakes entries together and divide a resulting award from the sweepstakes among the participants of the group. A game of skill is synchronized

with the event. The game of skill is synchronized with the event using watermarking or fingerprinting. The multiple contests of skill are generated by users using a template. Promotional awards are awarded for participating. Frequent player points are offered for participating. Users are able to invite other user to a contest of the multiple contests of skill through a social networking site. A user pays a separate consideration to play in a contest of the multiple contests of skill through a micropayments system, where a prize is supplemented or funded by an entry fee or consideration paid by all who participate in a group.

BRIEF DESCRIPTION OF THE DRAWINGS

FIG. **1** illustrates a flowchart of a process of utilizing the present invention.

FIG. **2** illustrates a flowchart of a process of generating a user generated competition group.

FIG. **3** illustrates a graphical representation of an embodiment of the present invention.

FIG. **4** illustrates a graphical representation of a network of devices.

DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENT

A method and system for conducting a variety of competitions simultaneously are described herein. The organization of competition in a game of skill has previously taken one of three basic formats:

1) Open contests: where large numbers of players enter an event, and all of the entrants are competing against each other for a single prize pool.

2) Head-to-head: where competitors are matched between a relatively small number of players identified to compete head-to-head against each other. The actual match making occurs in many forms, such as match play or elimination tournaments.

3) Team competitions: where two or more people are teamed to compete in head-to-head elimination against other similar sized teams in match play or total score competitions.

The present invention is a system and method allowing participants to simultaneously compete in multiple contests based on a single performance. For example, a user is able to participate in an open contest, compete in a team competition, and also compete against a small group of friends all utilizing a score achieved in the same event.

As a comparison, in tournaments held for bowling or golf, players are able to compete simultaneously in a gross score tournament as well as a net (handicap) tournament with the same performance. However, the contestants in the gross and net competitions are identical. The focus of the present invention is on enabling the entry of an individual in separate competitions, with separate prizes based on their single performance (score), where the pool of entrants is different for each competition.

The default mechanism for organizing a competition for this type of game in the past has been an open contest where all competitors are automatically entered in a contest against all other players. As taught in U.S. Pat. No. 5,813,913, incorporated herein by reference, the competitive field of players is also able to be divided into separate flights or groups according to skill and experience and only scores from other competitions at the same skill level are compared. Thousands of players are able to compete in a particular football game within a particular skill level.

For this example, Player A has been rated as an "intermediate" player and is competing against 10,000 other "intermediate" players in an interactive game of skill played with a live Monday Night Football broadcast. Prior to the telecast, Player A has arranged a side competition against four of his friends. Player B has organized through a match-making interface, a small competition which includes Players A, B, C, D and E. In this example, Players A and B are intermediate players, but Players C, D and E are novice players. Player B has also organized this small competition to require a $2.00 entry fee with a winner-takes-all rule. While none of the competitions require prizes or awards, they are allowable in games of skill.

When Player A logs on to a network supporting mobile games of skill, he is presented with the option of competing in the private separate contest that Player B set up. Player A agrees to compete with the $2.00 entry fee.

Separately, Player A has previously registered to participate in a sponsored season long team competition with coworkers F, G and H. The highest two scores of their four man team are totaled, and these points are added to the season's cumulative score with the highest team scores winning prizes. Thus, for a single football game, Player A is registered in: an open competition where the best competitors win prizes, a friendly competition for a prize pool of $10, and a season long team competition.

During the football game, Player A, like all of the other players, tries to get the best possible score by predicting the plays correctly before they happen. He plays in the same manner he would playing in the open contest alone, but his performance is in fact simultaneously separately scored in these completely different competitions against a different set of opponents for different rewards.

At the end of the event, Player A scored 12,565 points, in this example. That score was in the 92^{nd} percentile among the 10,000 intermediate players, but not high enough to win an award in that contest. That same score of 12,565 was also compared against Players B, C, D and E, and was the highest score, so Player A won the separate competition of $10. At the same time, Player A's score was the second highest among his team members in the separate team competition, and therefore was one which was totaled for the season long team competition.

It is essential to the success and enjoyment of such an invention that a potential competitor have an easy method of registering and entering these separate competitions on an ad hoc or seasonal basis. In addition, it is important to the success of such a system that all of the competitors be able to monitor periodically, not only their ongoing standings in the overall open competition at their skill level, but they will be able to periodically review all the competitions they are entered into to see the current standings.

For each of these competitions, there are two ways the group of attendees are able to be formed: A) organized by the service provider and/or a commercial sponsor or B) organized by the users themselves. Examples of service provider generated groups include those based on competitive skill level and region. For example, all intermediate players for a specific football game. An example of a user generated group is identifying five friends for a football competition. As each player enters a particular event (e.g. Monday Night Football), they are informed of the competitions they are playing in (e.g. Intermediate Global competition, the California Bay Area competition, and the personal Group competition). Each group is able to have a generic name and/or a specific name such as "personal group competition 1" or "Bob's Competition." When a player's phone or computing

device establishes a connection with the network (e.g. the Airplay Network), the network identifies all of the groups that this player is able to compete in, and the server will upload this information to the phone over a cellular connection for display to the user. When a user couples to the network with a computing device other than a cellular phone, the information is available through the Internet. In some embodiments, participation in various group competitions involves additional fees. Users have the ability to choose not to compete in any or all of the groups they have been invited to.

There are two classes of Groups: System Generated Groups (e.g. Service Provider Groups) and User Generated Groups. System Generated Groups are generated by the service administrator based on database information about the user. Examples include Intermediate Skill Level and California Bay Area San Francisco 49ers Fans. User Generated Groups are defined by one or more members. A member is able to generate a group either from the services website or from a cellular phone interface. To generate a group, a member generates a name for the group or a generic name is assigned, and then the member adds other members to the group. The member is able to add other members to the group by their handle (unique identifier), email address (for new members) or by their cellular phone number. Groups are able to be assigned to a particular event. A group is able to be designated as an active group or a party. User group owners generate a party by associating the group to a particular event (e.g. December 12^{th} Monday Night Football Game). In some embodiments, an email invitation or text message is sent to inform the members of the group that they have been invited to a party. In some embodiments, users are able to generate a group by joining together "friends" on social network sites such as Facebook, Twitter, Google+ or any other site. For example, a user is able to select "all Facebook contacts" to invite to join a group.

The game control server maintains a list of groups. Service Provider Groups are automatically assigned to events. User Groups are assigned to events by the group owners. In both cases, a list of active groups is known before the start of the event such as parties for a particular event. Within each of these known groups a list of all the participants is also maintained. This is able to be implemented in several ways. The most common way is via a database manager. This is able to be done through a data structure that is loaded for each event, and a database is one natural implementation to keep track of the group/participant relationships.

Throughout the game, a server manages the scores for every player. The scores are updated in a central location such as a database server, and are sorted with the members of a particular group to identify the rankings for each member in the competition.

During an event, scores and rankings are sent to members of the various groups. This is done after each scoring opportunity, or at a slower pace such as every five minutes or every five scoring opportunities. For small groups (e.g. 20 or less active participants) all of the scores and rankings are able to be sent by the server and displayed on the participant's device. For very large groups there are two approaches that can be taken: 1) Common message or 2) Individualized message. Sending a common message for large groups is much more efficient on the network, and is able to still provide a significant amount of information. The message is able to contain the top 20 names and scores for this group as well as the score that is required to be in the top 95%, 90%, 85%, . . . 5%. When the client receives this message, it determines what percentile the user is in by extrapolating its score between the percentile scores that the user is between. In sending an individual message for a large group, the server would still send the top 20 names and scores as well as the exact percentile that this user falls in.

Each separate tournament is managed effectively. A message is sent from the game server to the individual clients associated with each group. For very large groups, this message is able to be identical for all of those that are receiving the message. Past results tracked on the cell phone and in more detail on the website will track the rankings in each of the different groups associated with an event. A selection of pre-produced audio and visual comments, for example, in the nature of taunts and cheers are able to be selected from a menu and sent to a specific individual or to all competitors in the group.

Games of skill played on the Internet or cellular phones based upon live telecast sporting events, popular game shows or commercials contained within the broadcast are expected to attract a large number of potential competitors. As in all games of skill, there will be a wide variety of experience and talent and many motivations to play. To some, the enjoyment will be competing in open competitions against skilled players to test their medal. For others, it may be just the ability to compete and possibly win against a handful of close friends who share the same passion for the underlying televised event. Others may be more team oriented and derive more enjoyment from participating as a member of the group. The method and systems described herein provide not only the ability for an individual to find a group of competitors and a contest attractive to them, but also allows them to compete in multiple contests simultaneously with the identical performance and with the same investment of time. This increases not only the sense of community, but provides greater opportunities for the satisfaction of beating friends as well as winning prizes.

FIG. **1** illustrates a flowchart of a process of utilizing the present invention. In the step **100**, competitive groups are generated related to events. The competitive groups are either system generated or user generated. As described above, a system generated group is generally based on skill level, location or another generic attribute that some users qualify for, while other users do not. A user generated group is selected by a user where participants are added to the group by entering a username, email address, cellular phone number, or another distinguishing identifier. User generated groups typically include groups of friends, co-workers and other groups of people that a user wants to compete with. Any number of system groups and user groups are able to be generated. In addition to determining who is included in the competition, the events being played within the competition are selected. For example, a user is able to set up a Monday Night Football league, wherein every Monday night for the regular season of the NFL, the users within the group compete based on the Monday night game. In some embodiments, the specific games that the users compete in are selected at later dates beyond the initial generation of the group.

In the step **102**, users couple to a network (e.g. a social network such as GetGlu, Miso or a network game) to participate in the generated competitions. In the step **104**, the users are informed which competitions are available for participation. For example, an intermediate user couples to the network using his cellular phone and is greeted with a list of competitions available for him to join. The list includes, a free open competition for all intermediate players for a specified game, an individual group competition that his

friend invited him to join also for the same specified game, a team competition that his co-workers wanted him to be a part of where it is a season long tournament which includes the same specified game and another system generated competition also for the same game that costs $10 to enter with larger prizes available than the free competition. In the step **106**, each user who has coupled to the network joins the groups desired. Continuing with the example above, the user decides to join the free open competition, the friend's competition and the co-worker competition but does not join the $10 competition.

In the step **108**, the users then participate in the competitions by sending user selections (e.g. predictions) to a server within the network for monitoring, analyzing and determining results based on the selections. Based on the results, standings for each competition are also determined. Using the example above again, although the user joined three different competitions related to a single game, the user competes exactly the same as if he entered in only one of the competitions, since his input is distributed for the three different competitions.

In the step **110**, the results based on the users' selections are stored. The results are stored in a way such that they are easily retrieved for each competition. For example, a storing mechanism such as a database stores the results of Game X for Player A where Player A's score is 1000. In the free open competition, Player A's score was not good enough to win a prize. However, in the friendly competition, it was the highest score, and in the co-worker team competition it was a score usable by the team. Therefore, although the score was not a winning score for one competition, it was a beneficial score in the other two competitions. By competing in multiple competitions for the same game/event, a user's results/score could provide different outcomes depending on the competition. Therefore, the proper associations of each competition and the score are required.

In the step **112**, each user receives the results and/or standings on his cellular phone or computer. The results and/or standings arrive at varying times depending on the setup of the system. The results and/or standings are received or at least accessible after the competition ends. If desired, the results and/or standings are also received throughout the competition such as every five minutes or after a certain number of selections are made. The standings from the results determine who wins at the end of the competition. While displayed during the game, the standings show what position the user is in. The standings are based on the results of the selections made by the users.

FIG. **2** illustrates a flowchart of a process of generating a user generated competition group. In the step **200**, a user couples to a server within a network (e.g. the Airplay Network) storing an application to generate a competition group. In some embodiments, the application is stored on the user's cellular phone instead of or in addition to on the server and is able to utilize HTML5 or use native applications on the user's cellular phone such as Java and Flash, or HTML5. Using HTML5, the processing is performed on the server, and HTML5 allows the browser on the mobile device to appear as an application even though it is a web page. Preferably, the application provides a graphical user interface such as an interactive website for easily generating the competition group. In the step **202**, the user selects the type of competition, such as open, head-to-head or team, in addition to other types of competitions. The user also adds any additional requirements or conditions such as intermediate players only or $2 entry fee with the winner-take-all. Additionally, the user labels or names the competition group. In the step **204**, competitors are added to the competition. The competitors are added based on a username, phone number, email address or another identification mechanism. In the step **206**, either at the initial set up of the competition group or later on, one or more events are selected to be competed in. For example, if a user wants to set up a competition specifically for Super Bowl XLI, he is able to designate that immediately. Or if a user wants to start a week-long competition related to Jeopardy, he is able to do that as well. The user is also able to retain the same group and modify it to generate a second competition. For example, after the Super Bowl XLI competition ends, the user is able to generate another competition with the same group for the NCAA BCS Bowl Championship Game. Users are able to generate as basic or as complex a competition group as desired. As described above, it is able to be for a single event, a variety of events or an entire season of events. Preferably, a database is utilized to organize the competition groups for easy correlation of data.

FIG. **3** illustrates a graphical representation of an embodiment of the present invention. A server **300** contains an application **302** and a storage mechanism **304**. The application **302** is preferably a web application or at least has a web component to enable users to interact with a web graphical user interface to input data and review data. The storage mechanism **304** is utilized for storing selections and results from the selections as well as competition groups. The storage mechanism **304** preferably includes a database for organizing the data including the selections, results, standings and competition groups amongst other data needed for executing the competitions. The server **300** is part of a network **306**. A device **308** couples to the server **300** through the network **306**. In some embodiments the network **306** includes the Internet. In some embodiments, the network **306** includes a cellular network Also, in some embodiments, the network **306** includes both the Internet and a cellular network. The device **308** is selected from a cellular phone, a PDA, a computer, a laptop, a smart phone (e.g. an iPhone®), a tablet (e.g. an iPad®), or any other device capable of communicating with the server **300**. As described above, in some embodiments, an application for allowing users to generate competition groups, input selections and communicate with the server in general is included in the device **308** instead of or in addition to the application **302** on the server **300**.

FIG. **4** illustrates a graphical representation of a network of devices. As described above, the server **300** contains the application **302** and the storage mechanism **304** for inputting and outputting data related to the competitions. The device **308**, couples to the network through a network **306**. As described above, the network includes either the Internet, a cellular network or both. Although the device **308** is able to be a device other than a cellular phone as shown, other devices are also shown coupled to the network **306** therefore forming a network of devices **400**. The other devices include a laptop **310**, a computer **312** and a PDA **314**. One of the devices **308** is shown with an application **320** for enabling the user to generate competition groups and communicate with the server **300**.

In some embodiments, handicaps are implemented so that users of different levels are able to compete more fairly. Handicaps provide additional points to users at lower levels so their score is comparable to a more advanced user. The handicaps are determined based on analysis of the scoring. For example, if advanced users on average score **3000**, while intermediate users on average score **2000** and beginners on average score **1000** for the same set of questions, then a fair

handicap is 1000 per difference in level. Thus, when there is a friendly competition between one user who is advanced by playing every week and three beginner users who play once a month just for fun, a straight game without handicaps is not likely going to be a close competition. However, if the beginner users are given help to put them on par with the advanced user, then the outcome of the competition could result in a beginner user winning.

In some embodiments, each user competes in the same game, but slightly different sets of questions/choices are posed based on the competition level. For example, an intermediate user chooses to play in an open intermediate competition and also with a group of beginner friends. Each of the beginner users is asked to choose what type of play the following play is going to be (e.g. Run or Pass). The intermediate user is also asked to choose the following play. However, the intermediate user is also asked to choose which direction the play will go (e.g. Left or Right). Therefore, the same game is being played to some extent, but there is a slight modification, so that more advanced users have additional options. However, when scoring, the additional options apply only across the same level. Thus, the user selecting Left or Right correctly has no effect on the scoring in the beginner competition. It only affects scoring for the intermediate competition. Thus, users are able to compete at different levels for the same event.

In some embodiments, interactive advertising is used in games of chance and/or skill, sweepstakes, promotional awards, offering frequent player points. For example, a game of skill is played where the game is based on the content of an advertisement or commercial. In some embodiments, users are provided with a template and/or other facilities to generate separate games and contests within the games and promotions available to all.

In some embodiments, a contest involves a sweepstakes event, a game of skill or a promotional event available to all viewing a common event, such as a television broadcast or webcast. In some embodiments, the event is a television commercial. In some embodiments, each and every viewer receives a pre-determined amount of fungible currency such as "points." In some embodiments, the points are earned for watching and/or participating with the television commercial. In some embodiments, the points are redeemable for prizes, services or any other purpose. A user or member of the service is able to choose from an existing template of game formats, or segments of formats, and using the service's ability to couple to and communicate with their friends who are members watching or otherwise, or through social networks such as Facebook, Twitter or Google+, invite friends to participate in their separate event. In some embodiments, the event is able to require all participants in a cohort to pool all points they are to receive for watching and have all points go to that member from this cohort chosen at random utilizing software supplied by the company operating the service. The system selects and credits all of the points won to the appropriate person's account. Instead of the points being awarded by chance, the winner of the points is based on skill, for example, is able to be the person from the cohort who answers all of the questions correctly with the cumulative fastest response time (e.g. the least time elapsed between display of the question and the entry of the correct answer). In some embodiments, the points are awarded in another manner. In some cases, users form teams and challenge other competitors (e.g. friends) to form teams where total scores are used, for teams with a specific number of members, or average scores for teams with unlimited number of members.

In some embodiments, participants about to watch a television commercial in exchange for a free entry into a sweepstakes available to all viewers have the ability to invite friends to pool their sweepstakes entries so that if any of the accepting members of the group is chosen, the resulting award is divided among the group as provided by the terms of the invitation, for example, to be shared equally or to be divided equally among participants (possibly participants chosen at random). In some embodiments, the contest involves solving a puzzle or playing a word game like Scrabble®, where team contests are enabled which permit teams of friends to work collaboratively.

Users are able to leverage various groups of friends to join a closed contest, where the organizer not only provides the system and method of generating the group but also provides various templates or separate elements of games and contests allowing the organizer/inviter to click on the desired elements, designate eligible friends, and have a company generate the separate contest, administer the contest and the results and credit the winnings.

In some embodiments, payment of separate consideration such as "points" from member's credit balances or separate cash micropayments is able to be implemented. In some embodiments, a user pays a separate consideration to play in a contest of the multiple contests of skill through a micropayments system, where a prize is supplemented or funded by an entry fee or consideration paid by all who participate in a group.

In some embodiments, a game of skill is synchronized with a television broadcast. The synchronization is able to be implemented in any manner including, but not limited to, watermarking, fingerprinting and any other implementation. For example, the mobile device and/or the game of skill application determines the start (or some other point) in a broadcast, synchronizes the game with the broadcast. For example, a game that is based on commercials, is synchronized with the broadcast, so that when the commercials appear, the game begins. In some embodiments, advertisements/commercials are displayed on a user's mobile device synchronized with the content of the television. For example, if user is watching football on television, the mobile device is able to detect that and present the user a football or beer advertisement.

One methodology of synchronizing a game of skill or chance with a television broadcast requires the cooperation of an employee of the game provider based on visual observation of the telecast for that market, utilizing a personal computer and the Internet, or by utilizing their local cellular phone, all coupled to the game server.

Another methodology includes utilizing an audio or video recognition system with online access to the broadcast of the underlying television program for each separate market which provides real-time tracking of the television broadcast to the game control server, ensuring the game data file is able to be precisely synchronized to the television picture. Information is also able to be inserted in a Vertical Banking Interval (VBI) of the taped syndicated show and tracked online in real time by the game control server. For remote telecasts and online connection from a remote device, reading data embedded in the VBI via a high speed connection to the central game server is utilized. Utilizing some of the procedures outlined above, the propagation delays in the receipt of the cellular transmissions are also monitored and the game server adjusts the data files containing the "lock outs" to accommodate the systemic delay in the delivery of the game data on the cellular networks. In some embodi-

ments, a signal based on audio recognition is sent to a server which synchronizes a preproduced file displayed on cohorts' clients.

Another methodology, with the cooperation of the producers of game shows, precise audio or video events in the telecast could either be added to the video, such as a visible count down, or existing events in the telecast identified by the producers as synchronization points which the competitors could utilize as start points for the previously downloaded data files at the press of an appropriate button on their cellular phone. This would trigger the launch of a program previously downloaded to the phone's RAM. Then, time synchronization would be launched.

One more methodology, referred to as watermarking, uses an audio signal, possibly sub-audible to humans, typically an audio artifact unique to a particular program, which is inserted into the taped audio track recognizable by the audio receiver in a cellular phone which would be utilized to start and/or continually keep the pre-produced data files resident on the cellular phone in synchronization with the telecast.

"Fingerprinting" records the soundtrack of every television programs' audio to a server. The microphone on a client is coupled to a massive audio archive on a server to identify what television program is being viewed and synchronize files on a server with the unfolding broadcast including the commercials.

In some embodiments, the game experience for users competing in games of skill or chance who experience a variety of propagation delays relating to where and how they receive a television broadcast is synchronized (e.g. using watermarking or fingerprinting).

To utilize the present invention, users select from or generate competition groups to participate in. The users select system generated competition groups which are specific to levels, geographic locations and other general categories. The users are also able to generate their own competition groups which include friends, family, co-workers or other groups of people they choose. After the competition groups are generated, users are able to join whichever group they are invited to. After joining one or more groups, the users are able to join additional groups beyond that as they are generated and become available to the user. A user is informed of the competition groups available for entering either by email, Short Message Service (SMS) text message, voice message or when the user couples to the network to view/play competitions. After joining the desired competition groups, the user participates in the competitions by answering questions or making selections based on viewing a sporting event, television show, game show, commercials contained within the broadcast or other event where skill or chance is involved in making choices. In addition, games of skill or games of chance with a common start time can be conducted simultaneously in real-time, based on classic card, dice, trivia, word and other games. The selections/answers/predictions are stored and results and/or standings are sent to the user. The results and/or standings throughout the competition show how well the user is doing compared to other competitors via standings, and when the competition is over, the results and/or standings determine who the winner is. Additionally, since multiple competitions are occurring based on a single event, the results and standings are organized so that the user is able to understand how he is doing in each event. For example, if a user is winning by a large margin in his two friendly competitions, but is slightly out of prize position in the open competition, he will not simply relax and coast to victory in his friendly competitions. He is able to realize that by performing slightly better, he still has a chance to win a prize in the open competition, while still winning easily in the friendly competitions.

In operation, the present invention allows users to set up and compete in multiple competitions for a single event. Although users are competing against typically different competitors in different competition groups, the same selections are utilized to produce scores that have specific meaning based on the competition group. As described above, a user may lose in one competition group but win in another competition group because the competitors are different. Also, the requirements of each group are different as well. For example, in team play, if the top two scores are counted and the user has one of the top two scores, then his score is important even though he lost in a different competition group. In another example, the competition group is a season long event where there is no weekly winner, but only a year-end winner. Thus, although the competitor is doing terrible one week and has no chance of winning the separate weekly competition, the user is still encouraged to do as well as possible for the year-end total. By allowing users to compete in multiple competition groups for the same event, the user interaction increases substantially. For example, instead of a user simply playing his standard weekly intermediate football competition, the user is also invited to play in his family's tournament for bragging rights, his friend's competition where the winner gets $20 and his co-worker's competition where the lowest score pays for a round of drinks the following Friday. With more chances to win, users have a much more vested interest in competing. To ensure users do not get frustrated with the scoring, the results and/or standings are displayed in a very user-friendly format so that a user knows how well he is doing in each respective competition.

In some embodiments, multiple servers are used within the network. For example, one server is dedicated for the scoring, a separate server is dedicated for the database and another server is dedicated for hosting the graphical user interface.

The present invention has been described in terms of specific embodiments incorporating details to facilitate the understanding of principles of construction and operation of the invention. Such reference herein to specific embodiments and details thereof is not intended to limit the scope of the claims appended hereto. It will be readily apparent to one skilled in the art that other various modifications may be made in the embodiment chosen for illustration without departing from the spirit and scope of the invention as defined by the claims.

What is claimed is:

1. A server device for conducting simultaneous multiple contests of skill or chance corresponding to one or more events comprising:

a. a storage mechanism; and

b. an application for interacting with the storage mechanism to allow a plurality of users to simultaneously and in real time compete in the multiple contests of skill or chance, the application further for:

i. receiving each of the plurality of user's input including event selections related to the one or more events and in which of the multiple contests of skill or chance the selections are to be applied, wherein the event selections are separately and simultaneously applied to each of the selected multiple contests of skill or chance, wherein the event selections enable simultaneously participating with a plurality of the multiple contests of skill or chance;

ii. storing results and standings for each of the multiple contests of skill or chance based on the event selections, wherein the standings are based on the results, wherein the standings are separated for each of the multiple contests of skill or chance; and

iii. transmitting the multiple and separate standings to each client device in real time, wherein the multiple contests of skill or chance are selected from single entry contests and multiple entry contests.

2. The server device as claimed in claim **1** wherein the application is further for providing an interface for generating competitive groups related to the one or more events.

3. The server device as claimed in claim **1** wherein the one or more events are selected from the group consisting of a television-based event, a scheduled competition, a scheduled series of competitions, a sporting event, an event based on a video game, computer game or electronic game, an entertainment show, a game show, a reality show, a news show and a commercial contained in a broadcast.

4. The server device as claimed in claim **1** wherein the one or more events comprise card, dice, trivia, word and other games of skill played simultaneously.

5. The server device as claimed in claim **1** wherein the standings are transmitted in real time to the client device and represent performance for each of the selected multiple contests of skill or chance.

6. The server device as claimed in claim **1** wherein a network identifies the multiple contests of skill or chance a user is eligible for.

7. The server device as claimed in claim **1** further comprising a database stored on the server device for managing the selections, the results, the standings and the multiple contests of skill or chance.

8. The server device as claimed in claim **1** wherein the results are adjusted using a handicap to users in lower level groups.

9. The server device as claimed in claim **1** further configured for implementing a lockout to prevent input after beginning of the one or more events.

10. The server device as claimed in claim **9** wherein the lockout occurs immediately before competitors in the contests of skill or chance are able to see relevant live game action unfold.

11. The server device of claim **1** wherein a number of entries for a user for a multiple entry contest of the multiple entry contests is based on a number of competitors participating in the multiple entry contest.

12. The server device of claim **1** wherein the multiple contests of skill or chance include different types of competitions selected from single day competitions, multiple day competitions and season long competitions.

13. The server device of claim **1** wherein users wager cash to participate in the multiple contests of skill or chance.

14. A device for participating in multiple real time contests of skill or chance corresponding to one or more events comprising:

a. a communications module for coupling to a server; and

b. an application for utilizing the communications module for coupling to a server to communicate with the server to allow a user to simultaneously compete in the multiple real time contests of skill or chance, wherein the application is configured for receiving user input including in which of the multiple real time contests of skill or chance to join and receiving additional user input including a single set of event selections related to the one or more events,

wherein the single set of event selections enable simultaneously and in real time participating separately with the selected multiple real time contests of skill or chance, wherein the multiple contests of skill or chance are selected from single entry contests and multiple entry contests.

15. The device as claimed in claim **14** wherein the one or more events are selected from the group consisting of a television-based event, a scheduled competition, a scheduled series of competitions, a sporting event, an event based on a video game, computer game or electronic game, an entertainment show, a game show, a reality show, a news show and a commercial contained in a broadcast.

16. The device as claimed in claim **14** wherein the one or more events comprise card, dice, trivia, word and other games of skill played simultaneously.

17. The device as claimed in claim **14** wherein the application allows a user to join one or more competitive groups which comprise user generated competitive groups including existing groups on a social networking site or a physical site hosting a social group.

18. The device as claimed in claim **14** wherein the device and the server implement HTML5.

19. The device as claimed in claim **14** further configured for implementing a lockout to prevent input after beginning of the one or more events.

20. The device as claimed in claim **19** wherein the lockout occurs immediately before competitors in the contests of skill or chance are able to see relevant live game action unfold.

21. The device of claim **14** wherein a number of entries for a user for a multiple entry contest of the multiple entry contests is based on a number of competitors participating in the multiple entry contest.

22. The device of claim **14** wherein the multiple contests of skill or chance include different types of competitions selected from single day competitions, multiple day competitions and season long competitions.

23. The device of claim **14** wherein users wager cash to participate in the multiple real time contests of skill or chance.

24. A method programmed in a memory of a device comprising:

a. generating a list of multiple contests of skill or chance to join;

b. presenting the list of multiple contests of skill or chance to join, wherein the multiple contests of skill or chance correspond to one or more events;

c. receiving user input including event selections related to the one or more events and to which of the multiple contests of skill or chance the selections are to be applied, wherein the event selections are separately applied to each of the selected multiple contests of skill or chance, wherein the event selections enable simultaneously and in real time participating in the selected multiple contests of skill or chance;

d. storing results and standings based on the event selections, wherein the standings are based on the results, wherein the standings are separated for each of the multiple contests of skill or chance; and

e. transmitting the standings to the device, wherein the multiple contests of skill or chance are selected from single entry contests and multiple entry contests.

25. The method as claimed in claim **24** wherein users are provided a currency for watching the one or more events or participating in the multiple contests of skill or chance.

26. The method as claimed in claim **25** where the currency is redeemable for prizes or services.

27. The method as claimed in claim **25** wherein each group pools the currency received by users and the currency is distributed to a member of each group.

28. The method as claimed in claim **24** wherein participants in a group of the competitive groups pool sweepstakes entries together and divide a resulting award from the sweepstakes among the participants of the group.

29. The method as claimed in claim **24** wherein a game of skill or chance is synchronized with the one or more events.

30. The method as claimed in claim **29** wherein the game of skill or chance is synchronized with the one or more events using a method of automatic content recognition.

31. The method as claimed in claim **24** wherein promotional awards are awarded for participating.

32. The method as claimed in claim **24** wherein users are able to invite other users to a contest of the multiple contests of skill or chance through a social networking site.

33. The method as claimed in claim **24** wherein a user pays a separate consideration to play in a contest of the multiple contests of skill or chance through a micropayments system, where a prize is supplemented or funded by an entry fee or consideration paid by all who participate in a group.

34. The method as claimed in claim **24** further comprising implementing a lockout to prevent input after beginning of the one or more events.

35. The method as claimed in claim **34** wherein the lockout occurs immediately before competitors in the contests of skill or chance are able to see relevant live game action unfold.

36. The method of claim **24** wherein a number of entries for a user for a multiple entry contest of the multiple entry contests is based on a number of competitors participating in the multiple entry contest.

37. The method of claim **24** wherein the multiple contests of skill or chance include different types of competitions selected from single day competitions, multiple day competitions and season long competitions.

38. The method of claim **24** wherein users wager cash to participate in the multiple contests of skill or chance.

* * * * *

Exhibit 4

US011451883B2

(12) **United States Patent**
Huske et al.

(10) **Patent No.: US 11,451,883 B2**
(45) **Date of Patent: *Sep. 20, 2022**

(54) **METHOD OF AND SYSTEM FOR MANAGING CLIENT RESOURCES AND ASSETS FOR ACTIVITIES ON COMPUTING DEVICES**

(71) Applicant: **Winview, Inc.**, Redwood City, CA (US)

(72) Inventors: **Tim Huske**, Sunnyvale, CA (US); **Mark J. Micheli**, San Francisco, CA (US); **Mark K. Berner**, Santa Clara, CA (US); **Matt Ford**, San Mateo, CA (US); **David B. Lockton**, Redwood City, CA (US)

(73) Assignee: **Winview, Inc.**, Redwood City, CA (US)

(*) Notice: Subject to any disclaimer, the term of this patent is extended or adjusted under 35 U.S.C. 154(b) by 0 days.

This patent is subject to a terminal disclaimer.

(21) Appl. No.: **16/893,180**

(22) Filed: **Jun. 4, 2020**

(65) **Prior Publication Data**

US 2020/0314506 A1 Oct. 1, 2020

Related U.S. Application Data

(63) Continuation of application No. 16/216,885, filed on Dec. 11, 2018, now Pat. No. 10,721,543, which is a (Continued)

(51) **Int. Cl.**
H04N 21/81 (2011.01)
H04N 21/478 (2011.01)
(Continued)

(52) **U.S. Cl.**
CPC ***H04N 21/8173*** (2013.01); ***H04L 67/01*** (2022.05); ***H04L 67/52*** (2022.05);
(Continued)

(58) **Field of Classification Search**
CPC H04N 21/8173; H04N 21/2187; H04N 21/41407; H04N 21/4307; H04N 21/442;
(Continued)

(56) **References Cited**

U.S. PATENT DOCUMENTS

2,831,105 A 4/1958 Parker
3,562,650 A 2/1971 Gossard et al.
(Continued)

FOREIGN PATENT DOCUMENTS

CA 2252074 11/1997
CA 2252021 11/1998
(Continued)

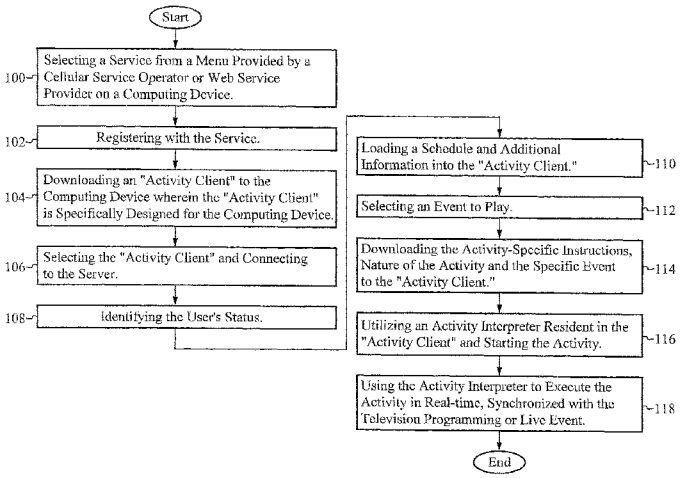
OTHER PUBLICATIONS

"Understanding the Interactivity Between Television and Mobile commerce", Robert Davis and David Yung, Communications of the ACM, Jul. 2005, vol. 48, No. 7, pp. 103-105.
(Continued)

Primary Examiner — Frantz B Jean
(74) *Attorney, Agent, or Firm* — Haverstock & Owens, A Law Corporation

(57) **ABSTRACT**

A method of and system for enabling a distributed entertainment system over a computing device is described herein. When implementing a distributed entertainment system wherein the entertainment system is directly correlated to live events or televised programs, there are a number of issues that must be addressed such as differing timing and channels of television programs and separate state laws. Furthermore, there are a plethora of varying computing device models possibly requiring model-specific software. An "Activity Client" is provided to handle such concerns. Furthermore, since time is of the essence for activities based on live or televised events, it is necessary to ensure a computing device is able to receive the necessary updates
(Continued)



for the program before the event begins. By providing only the needed components instead of entire data packages, the present invention is able to much more efficiently prepare users' computing devices in time.

148 Claims, 4 Drawing Sheets

Related U.S. Application Data

continuation-in-part of application No. 14/997,352, filed on Jan. 15, 2016, now Pat. No. 10,165,339, which is a continuation of application No. 14/260,480, filed on Apr. 24, 2014, now Pat. No. 9,270,789, which is a continuation of application No. 11/472,241, filed on Jun. 20, 2006, now Pat. No. 8,738,694.

(60) Provisional application No. 60/692,356, filed on Jun. 20, 2005.

(51) **Int. Cl.**

H04N 21/475	(2011.01)
H04N 21/45	(2011.01)
H04N 21/443	(2011.01)
H04N 21/442	(2011.01)
H04N 21/2187	(2011.01)
H04N 7/173	(2011.01)
H04N 21/8545	(2011.01)
H04N 21/414	(2011.01)
H04N 21/43	(2011.01)
H04L 67/01	(2022.01)
H04L 67/52	(2022.01)

(52) **U.S. Cl.**

CPC ***H04N 7/173*** (2013.01); ***H04N 21/2187*** (2013.01); ***H04N 21/41407*** (2013.01); ***H04N 21/43074*** (2020.08); ***H04N 21/442*** (2013.01); ***H04N 21/4431*** (2013.01); ***H04N 21/4524*** (2013.01); ***H04N 21/4758*** (2013.01); ***H04N 21/4781*** (2013.01); ***H04N 21/8545*** (2013.01)

(58) **Field of Classification Search**

CPC H04N 21/4431; H04N 21/4524; H04N 21/4758; H04N 21/4781; H04N 21/8545; H04N 7/173; H04L 67/18; H04L 67/42

USPC 709/203

See application file for complete search history.

(56) **References Cited**

U.S. PATENT DOCUMENTS

4,141,548	A		2/1979	Everton
4,270,755	A		6/1981	Willhide et al.
4,386,377	A		5/1983	Hunter, Jr.
4,496,148	A		1/1985	Morstain et al.
4,521,803	A		6/1985	Glittinger
4,592,546	A		6/1986	Fascenda et al.
4,816,904	A		3/1989	McKenna et al.
4,918,603	A		4/1990	Hughes et al.
4,930,010	A		5/1990	MacDonald
5,013,038	A		5/1991	Luvenberg
5,018,736	A		5/1991	Pearson et al.
5,035,422	A		7/1991	Berman
5,073,931	A		12/1991	Audebert et al.
5,083,271	A		1/1992	Thatcher et al.
5,083,800	A		1/1992	Lockton
5,119,295	A		6/1992	Kapur
5,120,076	A		6/1992	Luxenberg et al.
5,213,337	A		5/1993	Sherman
5,227,874	A		7/1993	Von Kohom
5,256,863	A		10/1993	Ferguson
5,263,723	A		11/1993	Pearson et al.
5,283,734	A		2/1994	Von Kohorn
5,327,485	A		7/1994	Leaden
5,343,236	A		8/1994	Koppe et al.
5,343,239	A		8/1994	Lappington et al.
5,417,424	A		5/1995	Snowden
5,462,275	A		10/1995	Lowe et al.
5,479,492	A		12/1995	Hofstee et al.
5,488,659	A		1/1996	Millani
5,519,433	A		5/1996	Lappington
5,530,483	A		6/1996	Cooper
5,553,120	A		9/1996	Katz
5,566,291	A		10/1996	Boulton et al.
5,585,975	A		12/1996	Bliss
5,586,257	A		12/1996	Perlman
5,589,765	A		12/1996	Ohmart et al.
5,594,938	A		1/1997	Engel
5,618,232	A		4/1997	Martin
5,628,684	A		5/1997	Jean-Etienne
5,636,920	A		6/1997	Shur et al.
5,638,113	A		6/1997	Lappington
5,643,088	A		7/1997	Vaughn et al.
5,663,757	A		9/1997	Morales
5,759,101	A		6/1998	Won Kohorn
5,761,606	A		6/1998	Wolzien
5,762,552	A		6/1998	Voung et al.
5,764,275	A		6/1998	Lappington et al.
5,794,210	A		8/1998	Goldhaber et al.
5,805,230	A		9/1998	Staron
5,813,913	A		9/1998	Bemer et al.
5,818,438	A	*	10/1998	Howe H04N 21/8166 715/718
5,828,843	A		10/1998	Grimm
5,838,774	A		11/1998	Weiser, Jr.
5,838,909	A		11/1998	Roy
5,846,132	A		12/1998	Junkin
5,848,397	A		12/1998	Marsh et al.
5,860,862	A		1/1999	Junkin
5,894,556	A		4/1999	Grimm
5,916,024	A		6/1999	Von Kohorn
5,870,683	A		9/1999	Wells et al.
5,970,143	A		10/1999	Schneier et al.
5,971,854	A		10/1999	Pearson et al.
5,987,440	A		11/1999	O'Neil et al.
6,009,458	A		12/1999	Hawkins et al.
6,015,344	A		1/2000	Kelly et al.
6,016,337	A		1/2000	Pykalisto
6,038,599	A		3/2000	Black et al.
6,042,477	A		3/2000	Addink
6,064,449	A		5/2000	White
6,104,815	A		8/2000	Alcorn et al.
6,110,041	A		8/2000	Walker et al.
6,117,013	A		9/2000	Elba
6,126,543	A		10/2000	Friedman
6,128,660	A		10/2000	Grimm
6,135,881	A		10/2000	Abbott et al.
6,154,131	A		11/2000	Jones, II
6,174,237	B1		1/2001	Stephenson
6,182,084	B1		1/2001	Cockrell et al.
6,193,610	B1		2/2001	Junkin
6,222,642	B1		4/2001	Farrell et al.
6,233,736	B1		5/2001	Wolzien
6,251,017	B1		6/2001	Leason et al.
6,263,447	B1		7/2001	French
6,267,670	B1		7/2001	Walker
6,287,199	B1		9/2001	McKeown et al.
6,293,868	B1		9/2001	Bernard
6,312,336	B1		11/2001	Handelman et al.
6,343,320	B1		1/2002	Fairchild
6,345,297	B1		2/2002	Grimm
6,371,855	B1		4/2002	Gavriloff
6,373,462	B1		4/2002	Pan
6,411,969	B1		6/2002	Tam
6,416,414	B1		7/2002	Stadelmann
6,418,298	B1		7/2002	Sonnenfeld
6,425,828	B2		7/2002	Walker et al.
6,434,398	B1		8/2002	Inselberg
6,446,262	B1		9/2002	Malaure et al.

(56) **References Cited**

U.S. PATENT DOCUMENTS

6,470,180 B1 10/2002 Kotzin et al.
6,475,090 B2 11/2002 Gregory
6,524,189 B1 2/2003 Rautila
6,527,641 B1 3/2003 Sinclair et al.
6,530,082 B1 3/2003 Del Sesto et al.
6,536,037 B1 3/2003 Guheen et al.
6,578,068 B1 6/2003 Bowma-Amuah
6,594,098 B1 7/2003 Sutardja
6,604,997 B2 7/2003 Saidakovsky et al.
6,610,953 B1 8/2003 Tao et al.
6,611,755 B1 8/2003 Coffee
6,648,760 B1 11/2003 Nicastro
6,659,860 B1 12/2003 Yamamoto et al.
6,659,861 B1 12/2003 Faris
6,659,872 B1 12/2003 Kaufman et al.
6,690,661 B1 2/2004 Agarwal et al.
6,697,869 B1 2/2004 Mallart
6,718,350 B1 * 4/2004 Karbowski G06F 8/65 707/695
6,752,396 B2 6/2004 Smith
6,758,754 B1 7/2004 Lavanchy et al.
6,758,755 B2 7/2004 Kelly et al.
6,760,595 B2 7/2004 Insellberg
6,763,377 B1 7/2004 Balknap et al.
6,766,524 B1 7/2004 Matheny et al.
6,774,926 B1 * 8/2004 Ellis H04N 21/4586 348/14.01
6,785,561 B1 8/2004 Kim
6,801,380 B1 10/2004 Saturdja
6,806,889 B1 10/2004 Malaure et al.
6,807,675 B1 10/2004 Millard et al.
6,811,482 B2 11/2004 Letovsky
6,811,487 B2 11/2004 Sengoku
6,816,628 B1 11/2004 Sarachik et al.
6,817,947 B2 11/2004 Tanskanen
6,824,469 B2 11/2004 Allibhoy et al.
6,837,789 B2 1/2005 Garahi et al.
6,837,791 B1 1/2005 McNutt et al.
6,840,861 B2 1/2005 Jordan et al.
6,845,389 B1 1/2005 Sen
6,846,239 B2 1/2005 Washio
6,857,122 B1 2/2005 Takeda et al.
6,863,610 B2 3/2005 Vancraeynest
6,870,720 B2 3/2005 Iwata et al.
6,871,226 B1 3/2005 Ensley et al.
6,873,610 B1 3/2005 Noever
6,884,166 B2 4/2005 Leen et al.
6,884,172 B1 4/2005 Lloyd et al.
6,887,159 B2 5/2005 Leen et al.
6,888,929 B1 5/2005 Saylor
6,893,347 B1 5/2005 Zilliacus et al.
6,898,762 B2 5/2005 Ellis et al.
6,899,628 B2 5/2005 Leen et al.
6,903,681 B2 6/2005 Faris
6,908,389 B1 6/2005 Puskala
6,942,574 B1 9/2005 LeMay et al.
6,944,228 B1 9/2005 Dakss et al.
6,960,088 B1 11/2005 Long
6,978,053 B1 12/2005 Sarachik et al.
7,001,279 B1 2/2006 Barber et al.
7,029,394 B2 4/2006 Leen et al.
7,035,626 B1 4/2006 Luciano, Jr.
7,035,653 B2 4/2006 Simon et al.
7,058,592 B1 6/2006 Beckerman et al.
7,076,434 B1 7/2006 Newman et al.
7,085,552 B2 8/2006 Buckley
7,116,310 B1 10/2006 Evans et al.
7,117,517 B1 10/2006 Milazzo et al.
7,120,924 B1 10/2006 Katcher et al.
7,124,410 B2 10/2006 Berg
7,125,336 B2 10/2006 Anttila et al.
7,136,871 B2 11/2006 Ozer et al.
7,144,011 B2 12/2006 Asher et al.
7,169,050 B1 1/2007 Tyler
7,185,355 B1 2/2007 Ellis
7,187,658 B2 3/2007 Koyanagi
7,191,447 B1 3/2007 Ellis et al.
7,192,352 B2 3/2007 Walker et al.
7,194,758 B1 3/2007 Waki et al.
7,228,349 B2 6/2007 Barone, Jr. et al.
7,231,630 B2 6/2007 Acott et al.
7,233,922 B2 6/2007 Asher et al.
7,240,093 B1 7/2007 Danieli et al.
7,244,181 B2 7/2007 Wang et al.
7,249,367 B2 7/2007 Bove, Jr. et al.
7,254,605 B1 8/2007 Strum
7,260,782 B2 8/2007 Wallace et al.
RE39,818 E 9/2007 Slifer
7,283,830 B2 10/2007 Buckley
7,288,027 B2 10/2007 Overton
7,341,517 B2 3/2008 Asher et al.
7,343,617 B1 3/2008 Kartcher et al.
7,347,781 B2 3/2008 Schultz
7,351,149 B1 4/2008 Simon et al.
7,367,042 B1 4/2008 Dakss et al.
7,379,705 B1 5/2008 Rados et al.
7,389,144 B1 6/2008 Osorio
7,430,718 B2 9/2008 Gariepy-Viles
7,452,273 B2 11/2008 Amaitis et al.
7,460,037 B2 12/2008 Cattone et al.
7,461,067 B2 12/2008 Dewing et al.
7,502,610 B2 3/2009 Maher
7,510,474 B2 3/2009 Carter, Sr.
7,517,282 B1 4/2009 Pryor
7,534,169 B2 5/2009 Amaitis et al.
7,543,052 B1 6/2009 Cesa Klein
7,562,134 B1 7/2009 Fingerhut et al.
7,602,808 B2 10/2009 Ullmann
7,610,330 B1 10/2009 Quinn
7,614,944 B1 11/2009 Hughes et al.
7,630,986 B1 12/2009 Herz et al.
7,693,781 B2 4/2010 Asher et al.
7,699,707 B2 4/2010 Bahou
7,702,723 B2 4/2010 Dyl
7,711,628 B2 5/2010 Davie et al.
7,729,286 B2 6/2010 Mishra
7,753,772 B1 7/2010 Walker
7,753,789 B2 7/2010 Walker et al.
7,780,528 B2 8/2010 Hirayama
7,828,661 B1 11/2010 Fish
7,835,961 B2 11/2010 Davie et al.
7,860,993 B2 12/2010 Chintala
7,886,003 B2 2/2011 Newman
7,907,211 B2 3/2011 Oostveen et al.
7,907,598 B2 3/2011 Anisimov
7,909,332 B2 3/2011 Root
7,925,756 B1 4/2011 Riddle
7,926,810 B2 4/2011 Fisher et al.
7,937,318 B2 5/2011 Davie et al.
7,941,482 B2 5/2011 Bates
7,941,804 B1 5/2011 Herington
7,976,389 B2 7/2011 Cannon et al.
8,002,618 B1 8/2011 Lockton
8,006,314 B2 8/2011 Wold
8,025,565 B2 9/2011 Leen et al.
8,028,315 B1 9/2011 Barber
8,082,150 B2 12/2011 Wold
8,086,445 B2 12/2011 Wold et al.
8,086,510 B2 12/2011 Amaitis et al.
8,092,303 B2 1/2012 Amaitis et al.
8,092,306 B2 1/2012 Root
8,105,141 B2 1/2012 Leen et al.
8,107,674 B2 1/2012 Davis et al.
8,109,827 B2 2/2012 Cahill et al.
8,128,474 B2 3/2012 Amaitis et al.
8,147,313 B2 4/2012 Amaitis et al.
8,147,373 B2 4/2012 Amaitis et al.
8,149,530 B1 4/2012 Lockton et al.
8,155,637 B2 4/2012 Fujisawa
8,162,759 B2 4/2012 Yamaguchi
8,176,518 B1 5/2012 Junkin et al.
8,186,682 B2 5/2012 Amaitis et al.
8,204,808 B2 6/2012 Amaitis et al.
8,219,617 B2 7/2012 Ashida

(56) **References Cited**

U.S. PATENT DOCUMENTS

8,240,669 B2 8/2012 Asher et al.
8,246,048 B2 8/2012 Amaitis et al.
8,267,403 B2 9/2012 Fisher et al.
8,342,924 B2 1/2013 Leen et al.
8,342,942 B2 1/2013 Amaitis et al.
8,353,763 B2 1/2013 Amaitis et al.
8,376,855 B2 2/2013 Lockton et al.
8,396,001 B2 3/2013 Jung
8,397,257 B1 3/2013 Barber
8,465,021 B2 6/2013 Asher et al.
8,473,393 B2 6/2013 Davie et al.
8,474,819 B2 7/2013 Asher et al.
8,535,138 B2 9/2013 Amaitis et al.
8,538,563 B1 9/2013 Barber
8,543,487 B2 9/2013 Asher et al.
8,555,313 B2 10/2013 Newnam
8,556,691 B2 10/2013 Leen et al.
8,585,490 B2 11/2013 Amaitis et al.
8,622,798 B2 1/2014 Lockton et al.
8,632,392 B2 1/2014 Shore et al.
8,634,943 B2 1/2014 Root
8,638,517 B2 1/2014 Lockton et al.
8,641,511 B2 2/2014 Ginsberg et al.
8,659,848 B2 2/2014 Lockton et al.
8,672,751 B2 3/2014 Leen et al.
8,699,168 B2 4/2014 Lockton et al.
8,705,195 B2 4/2014 Lockton
8,708,789 B2 4/2014 Asher et al.
8,717,701 B2 5/2014 Lockton et al.
8,727,352 B2 5/2014 Amaitis et al.
8,734,227 B2 5/2014 Leen et al.
8,737,004 B2 5/2014 Lockton et al.
8,738,694 B2 5/2014 Huske et al.
8,771,058 B2 7/2014 Alderucci et al.
8,780,482 B2 7/2014 Lockton et al.
8,805,732 B2 8/2014 Davie et al.
8,813,112 B1 8/2014 Cibula et al.
8,814,664 B2 8/2014 Amaitis et al.
8,817,408 B2 8/2014 Lockton et al.
8,837,072 B2 9/2014 Lockton et al.
8,849,225 B1 9/2014 Choti
8,849,255 B2 * 9/2014 Choti H04L 67/18 455/414.1
8,858,313 B1 10/2014 Selfors
8,870,639 B2 10/2014 Lockton et al.
8,935,715 B2 1/2015 Cibula et al.
9,056,251 B2 6/2015 Lockton
9,067,143 B2 6/2015 Lockton et al.
9,069,651 B2 6/2015 Barber
9,076,303 B1 7/2015 Park
9,098,883 B2 8/2015 Asher et al.
9,111,417 B2 8/2015 Leen et al.
9,205,339 B2 12/2015 Cibula et al.
9,233,293 B2 1/2016 Lockton
9,258,601 B2 2/2016 Lockton et al.
9,270,789 B2 2/2016 Huske et al.
9,289,692 B2 3/2016 Barber
9,306,952 B2 4/2016 Burman et al.
9,314,686 B2 4/2016 Lockton
9,314,701 B2 4/2016 Lockton et al.
9,355,518 B2 5/2016 Amaitis et al.
9,406,189 B2 8/2016 Scott et al.
9,430,901 B2 8/2016 Amaitis et al.
9,457,272 B2 10/2016 Lockton et al.
9,498,724 B2 11/2016 Lockton et al.
9,501,904 B2 11/2016 Lockton
9,504,922 B2 11/2016 Lockton et al.
9,511,287 B2 12/2016 Lockton et al.
9,526,991 B2 12/2016 Lockton et al.
9,536,396 B2 1/2017 Amaitis et al.
9,556,991 B2 1/2017 Furuya
9,604,140 B2 3/2017 Lockton et al.
9,652,937 B2 5/2017 Lockton
9,662,576 B2 5/2017 Lockton et al.
9,662,577 B2 5/2017 Lockton et al.
9,672,692 B2 6/2017 Lockton
9,687,738 B2 6/2017 Lockton et al.
9,687,739 B2 6/2017 Lockton et al.
9,707,482 B2 7/2017 Lockton et al.
9,716,918 B1 7/2017 Lockton et al.
9,724,603 B2 8/2017 Lockton et al.
9,744,453 B2 8/2017 Lockton et al.
9,805,549 B2 10/2017 Asher et al.
9,821,233 B2 11/2017 Lockton et al.
9,878,243 B2 1/2018 Lockton et al.
9,881,337 B2 1/2018 Jaycob et al.
9,901,820 B2 2/2018 Lockton et al.
9,908,053 B2 3/2018 Lockton et al.
9,919,210 B2 3/2018 Lockton
9,919,211 B2 3/2018 Lockton et al.
9,919,221 B2 3/2018 Lockton et al.
9,978,217 B2 5/2018 Lockton
9,993,730 B2 6/2018 Lockton et al.
9,999,834 B2 6/2018 Lockton et al.
10,052,557 B2 8/2018 Lockton et al.
10,089,815 B2 10/2018 Asher et al.
10,096,210 B2 10/2018 Amaitis et al.
10,137,369 B2 11/2018 Lockton et al.
10,150,031 B2 12/2018 Lockton et al.
10,165,339 B2 12/2018 Huske et al.
10,186,116 B2 1/2019 Lookton
10,195,526 B2 2/2019 Lookton et al.
10,226,698 B1 3/2019 Lookton et al.
10,226,705 B2 3/2019 Lookton et al.
10,232,270 B2 3/2019 Lookton et al.
10,248,290 B2 4/2019 Galfond
10,279,253 B2 5/2019 Lockton
10,360,767 B2 7/2019 Russell et al.
10,569,175 B2 2/2020 Kosai et al.
10,653,955 B2 5/2020 Lockton
10,695,672 B2 6/2020 Lockton et al.
10,709,987 B2 7/2020 Lockton et al.
10,721,543 B2 7/2020 Huske et al.
10,981,070 B2 4/2021 Isgreen
2001/0004609 A1 6/2001 Walker et al.
2001/0005670 A1 6/2001 Lahtinen
2001/0013067 A1 8/2001 Koyanagi
2001/0013125 A1 8/2001 Kitsukawa et al.
2001/0020298 A1 9/2001 Rector, Jr. et al.
2001/0032333 A1 10/2001 Flickinger
2001/0036272 A1 11/2001 Hirayama
2001/0036853 A1 * 11/2001 Thomas G06Q 50/34 463/17
2001/0044339 A1 11/2001 Cordero
2001/0054019 A1 12/2001 de Fabrega
2002/0010789 A1 1/2002 Lord
2002/0018477 A1 2/2002 Katz
2002/0026321 A1 2/2002 Faris
2002/0029381 A1 3/2002 Inselberg
2002/0035609 A1 * 3/2002 Lessard G06F 16/9537 709/217
2002/0037766 A1 3/2002 Muniz
2002/0069265 A1 3/2002 Bountour
2002/0042293 A1 4/2002 Ubale et al.
2002/0046099 A1 4/2002 Frengut et al.
2002/0054088 A1 5/2002 Tanskanen et al.
2002/0055385 A1 5/2002 Otsu
2002/0056089 A1 5/2002 Houston
2002/0059094 A1 5/2002 Hosea et al.
2002/0059623 A1 * 5/2002 Rodriguez H04N 21/8166 725/91
2002/0069076 A1 6/2002 Faris
2002/0076084 A1 6/2002 Tian
2002/0078176 A1 6/2002 Nomura et al.
2002/0083461 A1 6/2002 Hutcheson
2002/0091833 A1 7/2002 Grimm
2002/0094869 A1 7/2002 Harkham
2002/0095333 A1 7/2002 Jokinen et al.
2002/0097983 A1 7/2002 Wallace et al.
2002/0099709 A1 7/2002 Wallace
2002/0100063 A1 7/2002 Herigstad et al.
2002/0103696 A1 8/2002 Huang et al.
2002/0105535 A1 8/2002 Wallace et al.
2002/0107073 A1 8/2002 Binney

(56) **References Cited**

U.S. PATENT DOCUMENTS

2002/0108112 A1 8/2002 Wallace et al.
2002/0108125 A1 8/2002 Joao
2002/0108127 A1 8/2002 Lew et al.
2002/0112249 A1 8/2002 Hendricks et al.
2002/0115488 A1 8/2002 Berry et al.
2002/0119821 A1 8/2002 Sen
2002/0120930 A1 8/2002 Yona
2002/0124247 A1 9/2002 Houghton
2002/0132614 A1 9/2002 Vanlujit et al.
2002/0133817 A1 9/2002 Markel
2002/0133827 A1 9/2002 Newman et al.
2002/0142843 A1 10/2002 Roelofs
2002/0144273 A1 10/2002 Reto
2002/0147049 A1 10/2002 Carter, Sr.
2002/0157002 A1 10/2002 Messerges et al.
2002/0157005 A1 10/2002 Bunk
2002/0159576 A1 10/2002 Adams
2002/0162031 A1 10/2002 Levin et al.
2002/0162117 A1 10/2002 Pearson
2002/0165020 A1 11/2002 Koyama
2002/0165025 A1 11/2002 Kawahara
2002/0177483 A1 11/2002 Cannon
2002/0184624 A1 12/2002 Spencer
2002/0187825 A1 12/2002 Tracy
2002/0198050 A1 12/2002 Patchen
2003/0002638 A1 1/2003 Kaars
2003/0003997 A1 1/2003 Vuong et al.
2003/0013528 A1 1/2003 Allibhoy et al.
2003/0023547 A1 1/2003 France
2003/0040363 A1 2/2003 Sandberg
2003/0054885 A1 3/2003 Pinto et al.
2003/0060247 A1 3/2003 Goldberg et al.
2003/0066089 A1 4/2003 Anderson
2003/0069828 A1 4/2003 Blazey et al.
2003/0070174 A1 4/2003 Solomon
2003/0078924 A1 4/2003 Liechty et al.
2003/0086691 A1 5/2003 Yu
2003/0087652 A1 5/2003 Simon et al.
2003/0088648 A1 5/2003 Bellaton
2003/0114224 A1 6/2003 Anttila et al.
2003/0115152 A1 6/2003 Flaherty
2003/0125109 A1 7/2003 Green
2003/0134678 A1 7/2003 Tanaka
2003/0144017 A1 7/2003 Inselberg
2003/0154242 A1 8/2003 Hayes et al.
2003/0165241 A1* 9/2003 Fransdonk G06Q 20/3823 380/258
2003/0177167 A1 9/2003 Lafage et al.
2003/0177504 A1 9/2003 Paulo et al.
2003/0189668 A1 10/2003 Newman et al.
2003/0195023 A1 10/2003 Di Cesare
2003/0195807 A1 10/2003 Maggio
2003/0208579 A1* 11/2003 Brady, Jr. H04L 67/34 709/223
2003/0211856 A1 11/2003 Zilliacus
2003/0212691 A1 11/2003 Kuntala et al.
2003/0216185 A1 11/2003 Varley
2003/0216857 A1 11/2003 Feldman et al.
2003/0228866 A1* 12/2003 Pezeshki H04L 67/04 455/422.1
2003/0233425 A1 12/2003 Lyons et al.
2004/0005919 A1 1/2004 Walker et al.
2004/0014524 A1 1/2004 Pearlman
2004/0015442 A1 1/2004 Hmlinen
2004/0022366 A1 2/2004 Ferguson et al.
2004/0025190 A1 2/2004 McCalla
2004/0056897 A1 3/2004 Ueda
2004/0060063 A1 3/2004 Russ et al.
2004/0073915 A1 4/2004 Dureau
2004/0088729 A1 5/2004 Petrovic et al.
2004/0093302 A1 5/2004 Baker et al.
2004/0152454 A1 5/2004 Kauppinen
2004/0107138 A1 6/2004 Maggio
2004/0117831 A1 6/2004 Ellis et al.
2004/0117839 A1 6/2004 Watson et al.
2004/0125877 A1 7/2004 Chang
2004/0128319 A1 7/2004 Davis et al.
2004/0139158 A1 7/2004 Datta
2004/0139482 A1 7/2004 Hale
2004/0148638 A1 7/2004 Weisman et al.
2004/0152517 A1 8/2004 Haedisty
2004/0152519 A1 8/2004 Wang
2004/0158855 A1 8/2004 Gu et al.
2004/0162124 A1 8/2004 Barton et al.
2004/0166873 A1 8/2004 Simic
2004/0176162 A1 9/2004 Rothschild
2004/0178923 A1 9/2004 Kuang
2004/0183824 A1 9/2004 Benson
2004/0185881 A1 9/2004 Lee
2004/0190779 A1 9/2004 Sarachik et al.
2004/0198495 A1 10/2004 Cisneros et al.
2004/0201626 A1 10/2004 Lavoie
2004/0203667 A1 10/2004 Shroder
2004/0203898 A1 10/2004 Bodin et al.
2004/0210507 A1 10/2004 Asher et al.
2004/0215756 A1 10/2004 VanAntwerp
2004/0216161 A1 10/2004 Barone, Jr. et al.
2004/0216171 A1 10/2004 Barone, Jr. et al.
2004/0224750 A1 11/2004 Ai-Ziyoud
2004/0242321 A1 12/2004 Overton
2004/0266513 A1 12/2004 Odom
2005/0005303 A1 1/2005 Barone, Jr. et al.
2005/0021942 A1 1/2005 Diehl et al.
2005/0026699 A1 2/2005 Kinzer et al.
2005/0028208 A1 2/2005 Ellis
2005/0043094 A1 2/2005 Nguyen et al.
2005/0076371 A1 4/2005 Nakamura
2005/0077997 A1 4/2005 Landram
2005/0060219 A1 5/2005 Ditering et al.
2005/0097599 A1 5/2005 Potnick et al.
2005/0101309 A1* 5/2005 Croome G06F 9/44584 455/418
2005/0113164 A1 5/2005 Buecheler et al.
2005/0003878 A1 6/2005 Updike
2005/0131984 A1 6/2005 Hofmann et al.
2005/0138668 A1 6/2005 Gray et al.
2005/0144102 A1 6/2005 Johnson
2005/0155083 A1 7/2005 Oh
2005/0177861 A1 8/2005 Ma et al.
2005/0210526 A1 9/2005 Levy et al.
2005/0216838 A1 9/2005 Graham
2005/0235043 A1 10/2005 Teodosiu et al.
2005/0239551 A1 10/2005 Griswold
2005/0255901 A1 11/2005 Kreutzer
2005/0256895 A1 11/2005 Dussault
2005/0266869 A1 12/2005 Jung
2005/0267969 A1 12/2005 Poikselka et al.
2005/0273804 A1 12/2005 Preisman
2005/0283800 A1 12/2005 Ellis et al.
2005/0288080 A1 12/2005 Lockton
2005/0288101 A1 12/2005 Lockton et al.
2005/0288812 A1 12/2005 Cheng
2006/0020700 A1 1/2006 Qiu
2006/0025070 A1 2/2006 Kim et al.
2006/0046810 A1 3/2006 Tabata
2006/0047772 A1* 3/2006 Crutcher H04L 67/02 709/212
2006/0053390 A1 3/2006 Gariepy-Viles
2006/0058103 A1 3/2006 Danieli
2006/0059161 A1 3/2006 Millett et al.
2006/0063590 A1 3/2006 Abassi et al.
2006/0082068 A1 4/2006 Patchen
2006/0087585 A1 4/2006 Seo
2006/0089199 A1 4/2006 Jordan et al.
2006/0094409 A1 5/2006 Inselberg
2006/0101492 A1 5/2006 Lowcock
2006/0111168 A1 5/2006 Nguyen
2006/0135253 A1 6/2006 George et al.
2006/0148569 A1 7/2006 Beck
2006/0156371 A1 7/2006 Maetz et al.
2006/0160597 A1 7/2006 Wright
2006/0174307 A1 8/2006 Hwang et al.
2006/0183547 A1 8/2006 McMonigle
2006/0183548 A1 8/2006 Morris et al.

(56) **References Cited**

U.S. PATENT DOCUMENTS

2006/0190654 A1 8/2006 Joy
2006/0205483 A1 9/2006 Meyer et al.
2006/0205509 A1 9/2006 Hirota
2006/0205510 A1 9/2006 Lauper
2006/0217198 A1 9/2006 Johnson
2006/0236352 A1 10/2006 Scott, III
2006/0248553 A1 11/2006 Mikkelson et al.
2006/0248564 A1 11/2006 Zinevitch
2006/0256865 A1 11/2006 Westerman
2006/0256868 A1 11/2006 Westerman
2006/0269120 A1 11/2006 Mehmadi et al.
2006/0285586 A1 12/2006 Westerman
2007/0004516 A1 1/2007 Jordan et al.
2007/0013547 A1 1/2007 Boaz
2007/0019826 A1 1/2007 Horbach et al.
2007/0028272 A1 2/2007 Lockton
2007/0037623 A1 2/2007 Romik
2007/0054695 A1 3/2007 Huske et al.
2007/0078009 A1 4/2007 Lockton et al.
2007/0083920 A1 4/2007 Mizoguchi et al.
2007/0086465 A1 4/2007 Paila et al.
2007/0087832 A1 4/2007 Abbott
2007/0093296 A1 4/2007 Asher
2007/0101358 A1 5/2007 Ambady
2007/0106721 A1 5/2007 Schloter
2007/0107010 A1 5/2007 Jolna et al.
2007/0129144 A1 6/2007 Katz
2007/0147870 A1 7/2007 Nagashima et al.
2007/0162328 A1 7/2007 Reich
2007/0183744 A1 8/2007 Koizumi
2007/0197247 A1 8/2007 Inselberg
2007/0210908 A1 9/2007 Putterman et al.
2007/0219856 A1 9/2007 Ahmad-Taylor
2007/0222652 A1 9/2007 Cattone et al.
2007/0226062 A1 9/2007 Hughes et al.
2007/0238525 A1 10/2007 Suomela
2007/0243936 A1 10/2007 Binenstock et al.
2007/0244570 A1 10/2007 Speiser et al.
2007/0244585 A1 10/2007 Speiser et al.
2007/0244749 A1 10/2007 Speiser et al.
2007/0265089 A1 11/2007 Robarts
2007/0294410 A1 12/2007 Pandya
2008/0005037 A1 1/2008 Hammad
2008/0013927 A1 1/2008 Kelly et al.
2008/0051201 A1 2/2008 Lore
2008/0066129 A1 3/2008 Katcher et al.
2008/0076497 A1 3/2008 Kiskis et al.
2008/0104630 A1 5/2008 Bruce
2008/0146337 A1 6/2008 Halonen
2008/0169605 A1 7/2008 Shuster et al.
2008/0222672 A1 9/2008 Piesing
2008/0240681 A1 10/2008 Fukushima
2008/0248865 A1 10/2008 Tedesco
2008/0270288 A1 10/2008 Butterly et al.
2008/0288600 A1 11/2008 Clark
2009/0011781 A1 1/2009 Merrill et al.
2009/0094632 A1 4/2009 Newman et al.
2009/0103892 A1 4/2009 Hirayama
2009/0186676 A1 7/2009 Amaitis et al.
2009/0163271 A1 9/2009 George et al.
2009/0228351 A1 9/2009 Rijsenbrij
2009/0234674 A1* 9/2009 Wurster G06Q 50/22 705/3
2009/0264188 A1 10/2009 Soukup
2009/0271512 A1 10/2009 Jorgensen
2009/0325716 A1 12/2009 Harari
2010/0099421 A1 4/2010 Patel et al.
2010/0099471 A1 4/2010 Feeney et al.
2010/0107194 A1 4/2010 McKissick et al.
2010/0120503 A1 5/2010 Hoffman et al.
2010/0137057 A1 6/2010 Fleming
2010/0203936 A1 8/2010 Levy
2010/0279764 A1 11/2010 Allen et al.
2010/0296511 A1 11/2010 Prodan
2011/0016224 A1 1/2011 Riley
2011/0053681 A1 3/2011 Goldman
2011/0065490 A1 3/2011 Lutnick
2011/0081958 A1 4/2011 Herman
2011/0116461 A1 5/2011 Holt
2011/0130197 A1 6/2011 Bythar et al.
2011/0227287 A1 9/2011 Reabe
2011/0269548 A1 11/2011 Barclay et al.
2011/0306428 A1 12/2011 Lockton et al.
2012/0058808 A1 3/2012 Lockton
2012/0115585 A1 5/2012 Goldman
2012/0157178 A1 6/2012 Lockton
2012/0264496 A1 10/2012 Behrman et al.
2012/0282995 A1 11/2012 Allen et al.
2012/0295686 A1 11/2012 Lockton
2013/0005453 A1 1/2013 Nguyen et al.
2013/0072271 A1 3/2013 Lockton et al.
2013/0079081 A1 3/2013 Lockton et al.
2013/0079092 A1 3/2013 Lockton et al.
2013/0079093 A1 3/2013 Lockton et al.
2013/0079135 A1 3/2013 Lockton et al.
2013/0079150 A1 3/2013 Lockton et al.
2013/0079151 A1 3/2013 Lockton et al.
2013/0196774 A1 8/2013 Lockton et al.
2013/0225285 A1 8/2013 Lockton
2013/0225299 A1 8/2013 Lockton
2014/0031134 A1 1/2014 Lockton et al.
2014/0100011 A1 4/2014 Gingher
2014/0106832 A1 4/2014 Lockton et al.
2014/0128139 A1 5/2014 Shuster et al.
2014/0155130 A1 6/2014 Lockton et al.
2014/0155134 A1 6/2014 Lockton
2014/0206446 A1 7/2014 Lockton et al.
2014/0237025 A1 8/2014 Huske et al.
2014/0248952 A1 9/2014 Cibula et al.
2014/0256432 A1 9/2014 Lockton et al.
2014/0279439 A1 9/2014 Brown
2014/0287832 A1 9/2014 Lockton et al.
2014/0309001 A1 10/2014 Root
2014/0335961 A1 11/2014 Lockton et al.
2014/0335962 A1 11/2014 Lockton et al.
2014/0378212 A1 12/2014 Sims
2015/0011310 A1 1/2015 Lockton et al.
2015/0024814 A1 1/2015 Root
2015/0067732 A1 3/2015 Howe et al.
2015/0148130 A1 5/2015 Cibula et al.
2015/0238839 A1 8/2015 Lockton
2015/0238873 A1 8/2015 Arnone et al.
2015/0258452 A1 9/2015 Lockton et al.
2015/0356831 A1 12/2015 Osibodu
2016/0023116 A1 1/2016 Wire
2016/0045824 A1 2/2016 Lockton et al.
2016/0049049 A1 2/2016 Lockton
2016/0054872 A1 2/2016 Cibula et al.
2016/0082357 A1 3/2016 Lockton
2016/0121208 A1 5/2016 Lockton et al.
2016/0134947 A1 5/2016 Huske et al.
2016/0217653 A1 7/2016 Meyer
2016/0271501 A1 9/2016 Balsbaugh
2016/0361647 A1 12/2016 Lockton et al.
2016/0375362 A1 12/2016 Lockton et al.
2017/0036110 A1 2/2017 Lockton et al.
2017/0036117 A1 2/2017 Lockton et al.
2017/0043259 A1 2/2017 Lockton et al.
2017/0053498 A1 2/2017 Lockton
2017/0065891 A1 3/2017 Lockton et al.
2017/0098348 A1 4/2017 Odom
2017/0103615 A1 4/2017 Theodospoulos
2017/0128840 A1 5/2017 Croci
2017/0221314 A1 8/2017 Lockton
2017/0225071 A1 8/2017 Lockton et al.
2017/0225072 A1 8/2017 Lockton et al.
2017/0232340 A1 8/2017 Lockton
2017/0243438 A1 8/2017 Merati
2017/0249801 A1 8/2017 Malek
2017/0252649 A1 9/2017 Lockton et al.
2017/0259173 A1 9/2017 Lockton et al.
2017/0264961 A1 9/2017 Lockton
2017/0282067 A1 10/2017 Lockton et al.
2017/0296916 A1 10/2017 Lockton et al.

(56) **References Cited**

U.S. PATENT DOCUMENTS

2017/0304726	A1	10/2017	Lockton et al.
2017/0345260	A1	11/2017	Strause
2018/0025586	A1	1/2018	Lockton
2018/0071637	A1	3/2018	Baazov
2018/0104582	A1	4/2018	Lockton et al.
2018/0104596	A1	4/2018	Lockton et al.
2018/0117464	A1	5/2018	Lockton et al.
2018/0140955	A1	5/2018	Lockton et al.
2018/0154255	A1	6/2018	Lockton
2018/0169523	A1	6/2018	Lockton et al.
2018/0190077	A1	7/2018	Hall
2018/0236359	A1	8/2018	Lockton et al.
2018/0243652	A1	8/2018	Lockton et al.
2018/0264360	A1	9/2018	Lockton et al.
2018/0300988	A1	10/2018	Lockton
2018/0318710	A1	11/2018	Lockton et al.
2019/0054375	A1	2/2019	Lockton et al.
2019/0060750	A1	2/2019	Lockton et al.
2019/0143225	A1	5/2019	Baazov

FOREIGN PATENT DOCUMENTS

CA	2279069		7/1999
CA	2287617		10/1999
EP	0649102	A3	6/1996
GB	2364485		1/2002
JP	11-46356		2/1999
JP	11-239183		8/1999
JP	2000-165840		6/2000
JP	2000-217094		8/2000
JP	2000-358255		12/2000
JP	2001-28743		1/2001
JP	2000-209563		7/2008
NZ	330242		10/1989
WO	01/039506	A2	5/2001
WO	01/65743	A1	9/2001
WO	02/03698	A1	10/2002
WO	2005064506	A1	7/2005
WO	2006004855		1/2006
WO	2006004856		1/2006
WO	2007002284		1/2007
WO	2007016575		2/2007
WO	2007041667		4/2007
WO	2008027811	A2	3/2008
WO	2008115858	A1	9/2008

OTHER PUBLICATIONS

"Re: Multicast Based Voting System" www.ripe.net/ripe/maillists/archives/mbone-eu-op/1997/msg00100html.

"IST and Sportal.com: Live on the Internet Sep. 14, 2004 by Clare Spoonheim", www.isk.co.usk/NEWS/dotcom/ist_sportal.html.

"PurpleAce Launches 3GSM Ringtone Competition", www.wirelessdevnet.com/news/2005/jan/31/news6html.

"On the Perfomance of Protocols for collecting Responses over a Multiple-Access Channel", Mostafa H. Ammar and George N. Rouskas, IEEE INCOMFORM '91, pp. 1490-1499, vol. 3, IEEE, New York, NY.

Ducheneaut et al., "The Social Side of Gaming: A Study of Interaction Patterns in a Massively Multiplayer Online Game", Palo Alto Research Center, Nov. 2004, vol. 6, Issue 4, pp. 360-369.

Pinnacle, "The basics of reverse line movement," Jan. 19, 2018, Retrieved on Jan. 22, 2020 , http://www.pinnacle.com/en/betting-articles educational/basics-of-reverse-line-movement/QAH26XGGQQS7M3GD.

Gambling Commission,"Virtual currencies, eSports and social casino gaming-position paper," Mar. 2017, Retrieved on Jan. 22, 2020, http://gamblingcomission.gov.uk/PDF/Virtual-currencies-eSports-and -social-casino-gaming.pdf.

Sipko et al.,"Machine learning for the prediction of professional tennis matches," In: MEng computing-final year project, Imperial College London, Jun. 15, 2015, http://www.doc.ic.ac.uk/teaching/distinguished-projects/2015/m.sipko.pdf.

Winview Game Producer, "Live TV Sports Play Along App WinView Games Announces Sponsorship With PepsiCo to Start This Holiday Season," in Winview Games. Dec. 21, 2016, Retrieved on Jan. 21, 2020 from , http://www. winviewgames./press-release/live-tv-sports-play-along-app-winview-games-announces-sponsorship-pepsico-start-holiday-season/.

The International Search Report and the Written Opinion for the PCT/US2019/054859 dated Feb. 4, 2020.

The International Preliminary Report dated Apr. 22, 2021 for the application PCT/US2019/054859.

Fantasy sport—Wikipedia.pdf, https://en.wikepedia.org/w/index.php?title=Fantasy_sport&oldid=685260969(Year:2015).

* cited by examiner

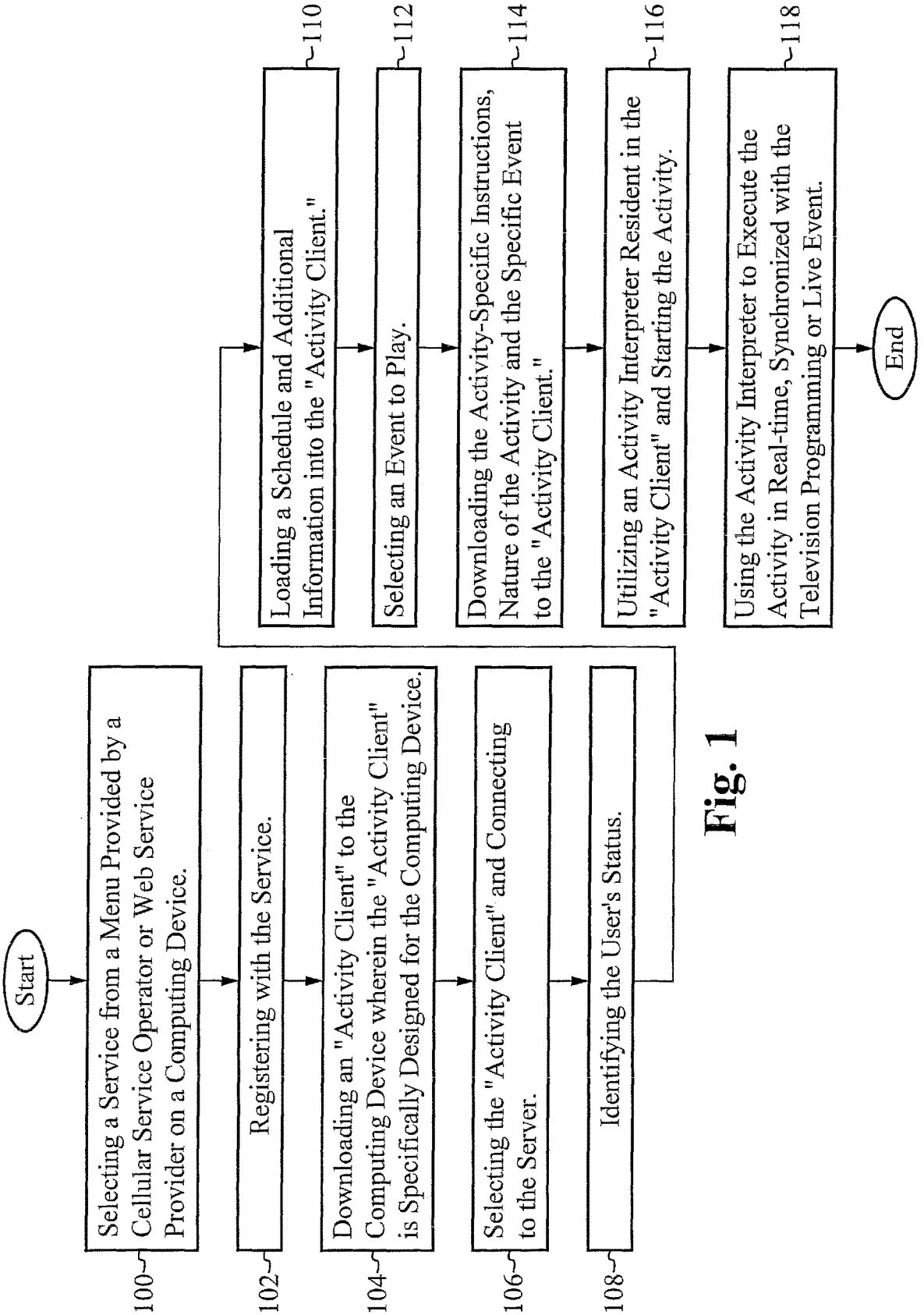

Start
Selecting a Service from a Menu Provided by a Cellular Service Operator or Web Service Provider on a Computing Device.
100
Registering with the Service.
102
Downloading an "Activity Client" to the Computing Device wherein the "Activity Client" is Specifically Designed for the Computing Device.
104
Selecting the "Activity Client" and Connecting to the Server.
106
Identifying the User's Status.
108
Loading a Schedule and Additional Information into the "Activity Client."
110
Selecting an Event to Play.
112
Downloading the Activity-Specific Instructions, Nature of the Activity and the Specific Event to the "Activity Client."
114
Utilizing an Activity Interpreter Resident in the "Activity Client" and Starting the Activity.
116
Using the Activity Interpreter to Execute the Activity in Real-time, Synchronized with the Television Programming or Live Event.
118
End

Fig. 1

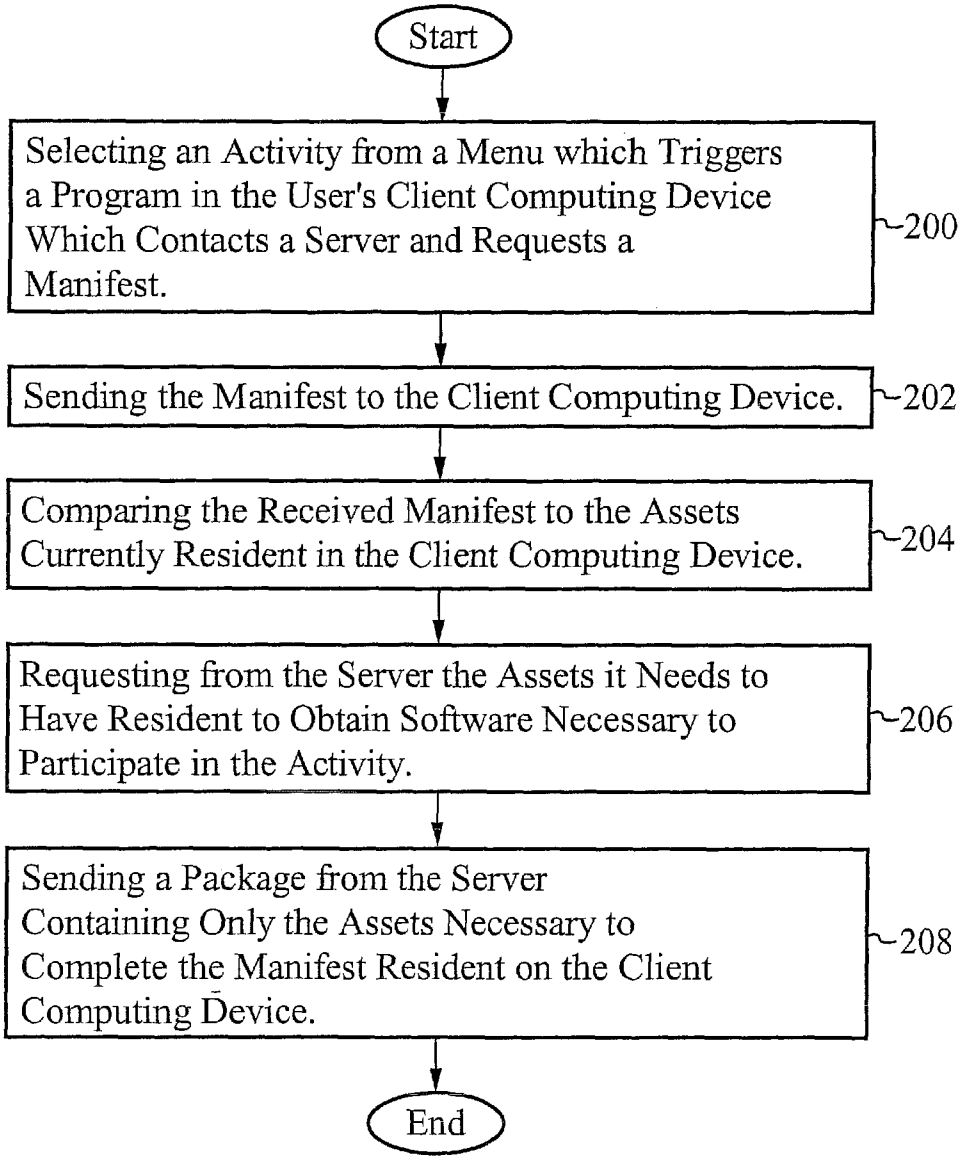

Start
Selecting an Activity from a Menu which Triggers a Program in the User's Client Computing Device Which Contacts a Server and Requests a Manifest.
200
Sending the Manifest to the Client Computing Device.
202
Comparing the Received Manifest to the Assets Currently Resident in the Client Computing Device.
204
Requesting from the Server the Assets it Needs to Have Resident to Obtain Software Necessary to Participate in the Activity.
206
Sending a Package from the Server Containing Only the Assets Necessary to Complete the Manifest Resident on the Client Computing Device.
208
End

Fig. 2

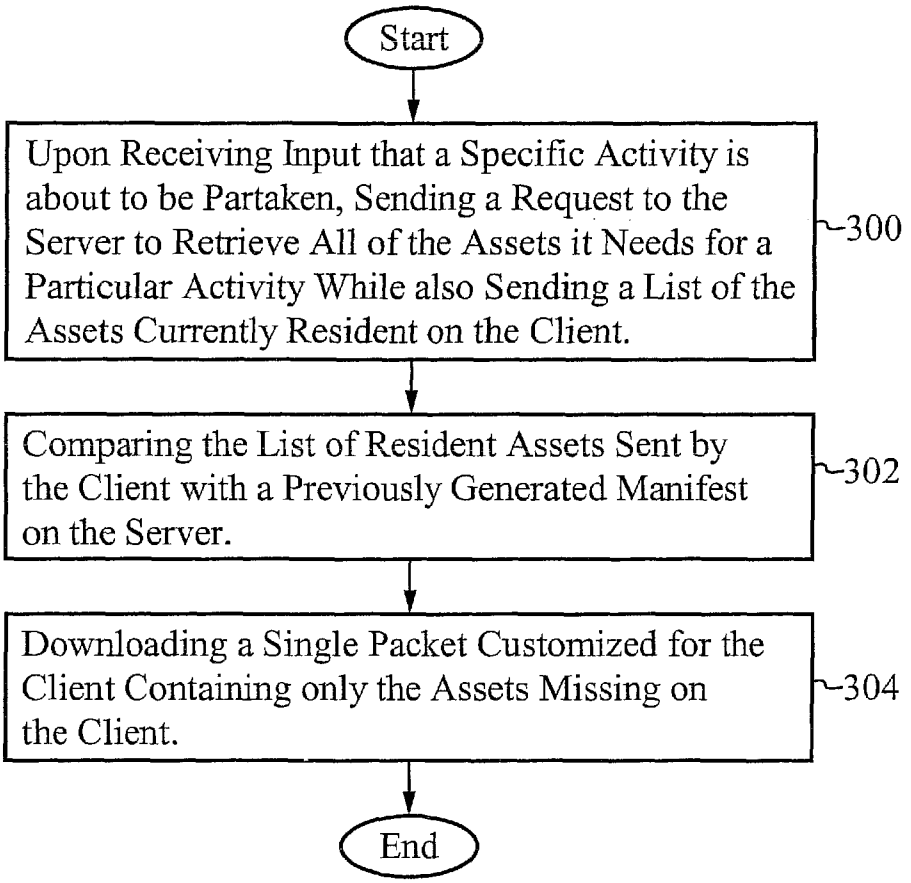

Start
Upon Receiving Input that a Specific Activity is about to be Partaken, Sending a Request to the Server to Retrieve All of the Assets it Needs for a Particular Activity While also Sending a List of the Assets Currently Resident on the Client.
300
Comparing the List of Resident Assets Sent by the Client with a Previously Generated Manifest on the Server.
302
Downloading a Single Packet Customized for the Client Containing only the Assets Missing on the Client.
304
End

Fig. 3

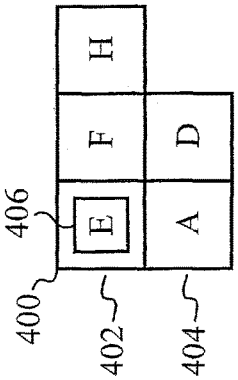

H
F
D
406
E
A
400
402
404

Fig. 4

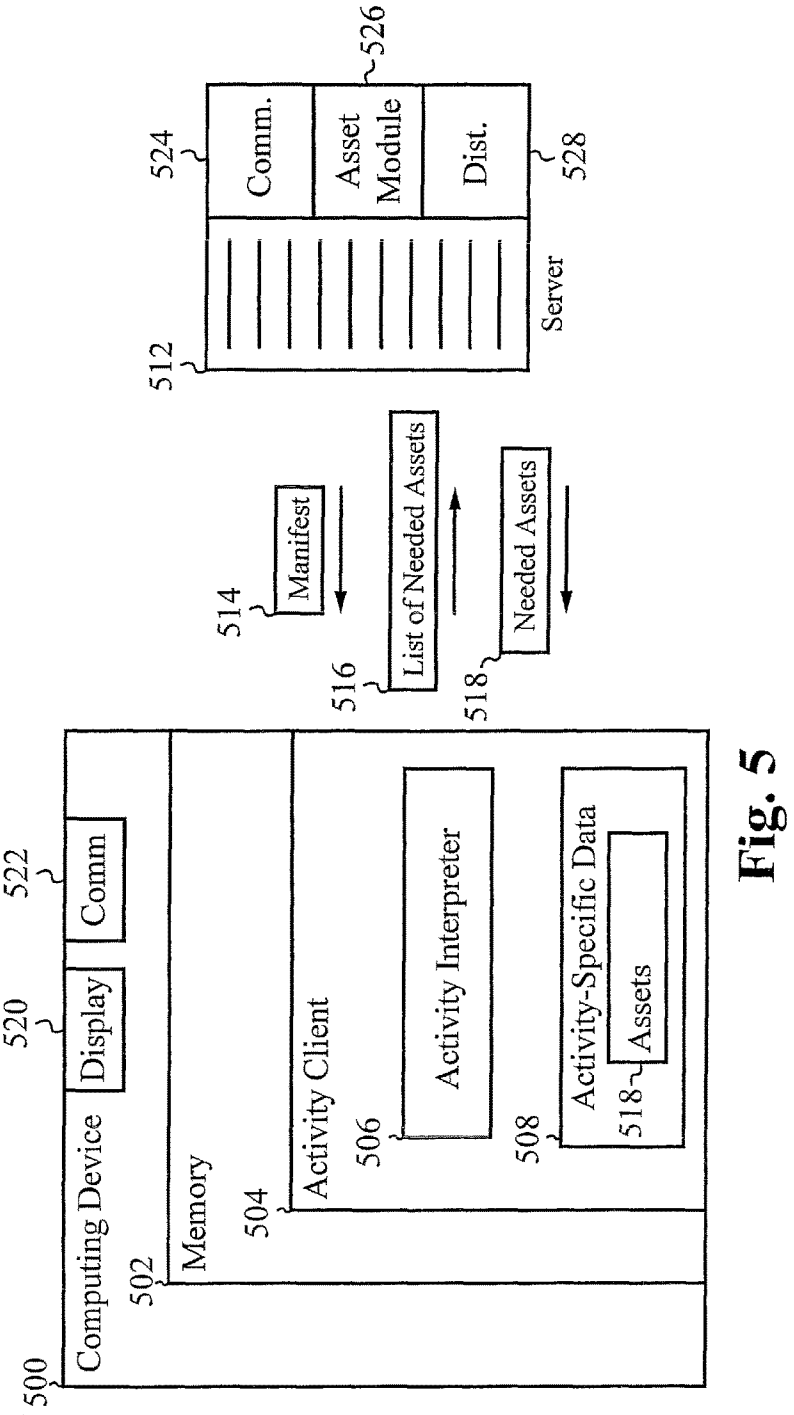

524
Comm.
Asset Module
526
Dist.
528
512
Server
514
Manifest
List of Needed Assets
516
Needed Assets
518
522
Comm
520
Display
Computing Device
500
Memory
502
Activity Client
504
Activity Interpreter
506
Activity-Specific Data
508
Assets
518

Fig. 5

METHOD OF AND SYSTEM FOR MANAGING CLIENT RESOURCES AND ASSETS FOR ACTIVITIES ON COMPUTING DEVICES

RELATED APPLICATION(S)

This Patent Application is a continuation of co-pending U.S. patent application Ser. No. 16/216,885, filed Dec. 11, 2018, entitled METHOD OF AND SYSTEM FOR MANAGING CLIENT RESOURCES AND ASSETS FOR ACTIVITIES ON COMPUTING DEVICES which is a continuation-in-part of U.S. patent application Ser. No. 14/997,352, filed on Jan. 15, 2016, entitled METHOD OF AND SYSTEM FOR MANAGING CLIENT RESOURCES AND ASSETS FOR ACTIVITIES ON COMPUTING DEVICES which is a continuation of U.S. patent application Ser. No. 14/260,480, filed on Apr. 24, 2014, entitled METHOD OF AND SYSTEM FOR MANAGING CLIENT RESOURCES AND ASSETS FOR ACTIVITIES ON COMPUTING DEVICES which is a continuation of U.S. patent application Ser. No. 11/472,241, filed on Jun. 20, 2006, entitled METHOD OF AND SYSTEM FOR MANAGING CLIENT RESOURCES AND ASSETS FOR ACTIVITIES ON COMPUTING DEVICES, now U.S. Pat. No. 8,738,694, which claims priority under 35 U.S.C. § 119(e) of the co-owned U.S. Provisional Patent Application No. 60/692,356, filed Jun. 20, 2005, and entitled SYSTEMS AND METHODOLOGIES ENABLING A CELL PHONE BASED SUBSCRIPTION SERVICE OFFERING A VARIETY OF SCHEDULED GAMES IN CONNECTION WITH LIVE TELEVISION PROGRAMMING" which are also all hereby incorporated by reference in their entirety.

This application is related to co-pending U.S. patent application Ser. No. 11/298,901, filed on Dec. 9, 2005 and entitled "A GAME OF SKILL PLAYED BY REMOTE PARTICIPANTS UTILIZING WIRELESS DEVICES IN CONNECTION WITH A COMMON GAME EVENT" and co-pending U.S. patent application Ser. No. 11/166,596, filed on Jun. 24, 2005 and entitled "METHODS AND APPARATUS FOR DISTRIBUTED GAMING OVER A MOBILE DEVICE" which claims priority under 35 U.S.C. § 119(e) of the co-pending U.S. Provisional Patent Application Ser. No. 60/588,273, filed Jul. 14, 2004 and entitled "A METHODOLOGY FOR PROVIDING ALL CONTESTANTS IN GAMES OF SKILL PLAYABLE ON CELL PHONES WITH THEIR CURRENT STANDING WHILE RECEIVING GAME CONTROL INFORMATION ONE-WAY VIA A 'BROADCAST' TRANSMISSION," which are all incorporated by reference in their entirety.

FIELD OF THE INVENTION

The present invention relates to the field of distributed entertainment. More specifically, the present invention relates to the field of distributed entertainment utilizing a computing device where the entertainment corresponds to an event.

BACKGROUND OF THE INVENTION

In the United States alone there are over 170 million registered cell phones. With the expiration of the U.S. Pat. No. 4,592,546 to Fascenda et al., companies are able to now use the cell phone and other mobile communication devices utilizing a multicast network to control television viewers in games of skill based upon predicting, for example, what the quarterback may call on the next play. In addition, games of skill with a common start time can be conducted simultaneously among cell phone owners, based on classic card, dice, trivia, and other games. In order to avoid the anti-gaming laws in the various states, elements of chance must be virtually non-existent in such games and the winners therefore determined by the relative skill, experience and practice of the player in each discrete game. In certain jurisdictions and under certain circumstances, simultaneous games of chance can be conducted using the same technology as games of skill.

Although the ability to play games and enjoy other activities corresponding to current events on cell phones exists, there are a number of issues regarding coordinating the games across a nationwide network. Cellular networks and other networks are only able to handle a limited amount of traffic, so when millions of participants utilize the network at the same time for a regularly scheduled event, there are concerns of the network being overloaded and bogged down to a point where users do not receive necessary data in a timely manner.

Furthermore, cell phones and other computing devices have their own limitations as well. Although cell phone memory is increasing as is typical with technology, cell phones still have a limited amount of memory. Moreover, many users still have somewhat older cell phones that have less memory than current models. In addition to the memory limitations, there are multiple cell phone service providers and a plethora of cell phone models using slightly different protocols. Cell phone users are also sensitive to the time it takes to download the necessary data to play games or enjoy activities.

Servers of the entertainment provider also have limited resources yet must be able to ensure the potentially millions of simultaneous users have the necessary and proper software resident on their cell phones in order to participate in scheduled interactive programs. Again, servers are continuously growing more powerful, quicker and more stable; however there is still potential to overload a server with excessive traffic.

Additionally, other aspects of a nationwide service generate potential issues such as multiple time zones, differing timing and channels of television programs and separate state laws.

SUMMARY OF THE INVENTION

A method of and system for enabling a distributed entertainment system over a computing device is described herein. When implementing a distributed entertainment system wherein the entertainment system is directly correlated to live events or televised programs, there are a number of issues that must be addressed such as differing timing and channels of television programs and separate state laws. Furthermore, there are a plethora of varying computing device models possibly requiring model-specific software. An "Activity Client" is provided to handle such concerns. Furthermore, since time is of the essence for activities based on live or televised events, it is necessary to ensure a computing device is able to receive the necessary updates for the program before the event begins. By providing only the needed components instead of entire data packages, the present invention is able to much more efficiently prepare users' computing devices in time.

In one aspect, a method of implementing an entertainment service on computing devices comprises downloading an activity client to a computing device, loading a set of event

information to the activity client, selecting an event to participate in from a list of possible events, downloading a set of activity-specific information from a server to the computing device and executing an application corresponding to the event on the computing device. The activity client is a program for managing activity information and data. The method further comprises selecting and registering with a television-related service. The method further comprises identifying a user status. Identifying the user status includes identifying a geographic location of the computing device. The activity client is specifically designed for the computing device. Executing the application is in real-time, synchronized with the event. The set of event information includes a schedule of available events. The schedule of available events includes a name of a television event, identification of an activity to be played with the television event, a television network and local channel offering the television event, a duration of the television event and information relating to nature of a prize related to the television event. The method further comprises displaying the set of event information. The set of event information is continually broadcast from the server and received at the computing device. The set of activity-specific information includes activity-specific instructions and information related to nature of the activity and event. An activity interpreter resident in the activity client is used to execute the application. The activity interpreter combines the activity, event and device instructions to execute the activity in real-time. The application is selected from the group consisting of a game, a survey and a poll. The computing device is a wireless device. The computing device is selected from the group consisting of a set-top box, a personal computer, a gaming console, a laptop computer, a cell phone, a PDA and a combination device. The method further comprises receiving a list of assets from the server, comparing the list of assets with a first set of assets on the computing device and receiving only a second set of assets within the list of assets that are not already resident on the computing device. The method further comprises improving efficiency by prioritizing the second set of assets. The second set of assets are grouped into a set of necessary assets and a set of preferred assets.

In another aspect, a method of receiving data on a client device to participate in a specific interactive event comprises receiving a list of assets from a server, comparing the list of assets with the assets on the client device and receiving only the assets within the list of assets that are not already resident on the client device. The method further comprises selecting an activity corresponding to an event from a menu of events. The activity is a game. The method further comprises requesting the list of assets from the server that are required to participate in the specific interactive event. The list of assets are sent from the server. The method further comprises requesting the assets not already on the client device. The method further comprises improving efficiency by prioritizing the assets. The assets are grouped into a set of necessary assets and a set of preferred assets. The client device is a wireless device. The client device is selected from the group consisting of a set-top box, a personal computer, a gaming console, a laptop computer, a cell phone, a PDA and a combination device.

In another aspect, a method of receiving data on a client device to participate in a specific interactive event comprises sending a request to a server from a client device to retrieve assets needed for an activity and concurrently sending a list of the assets currently resident on the client, comparing the list of resident assets sent by the client with a previously generated list of assets on the server and downloading a packet customized for the client containing only the assets missing on the client. The method further comprises improving efficiency by prioritizing the assets. The assets are grouped into a set of necessary assets and a set of preferred assets. The client device is a wireless device. The client device is selected from the group consisting of a set-top box, a personal computer, a gaming console, a laptop computer, a cell phone, a PDA and a combination device.

In yet another aspect, a system for receiving data to participate in a specific interactive event comprises a server and a client device coupled to the server for receiving a set of activity-specific data from the server wherein the client device comprises a memory for storing an activity client. The activity client is a program for managing activity information and data. The activity client further comprises an activity interpreter. A list of assets are utilized to determine which assets are downloaded to the activity client. A set of necessary assets are downloaded to the client device. The client device is a wireless device. The client device is selected from the group consisting of a set-top box, a personal computer, a gaming console, a laptop computer, a cell phone, a PDA and a combination device.

In another aspect, a client device comprises a communication interface, an activity client for receiving activity information through the communication interface and a display for displaying the activity information received by the activity client. The activity client is a program for managing activity information and data. The activity client further comprises an activity interpreter. The activity client receives a set of assets related to an application. The application is selected from the group consisting of a game, a survey and a poll. A list of assets are utilized to determine which assets are downloaded to the activity client. Only a set of necessary assets are downloaded to the activity client. The client device is selected from the group consisting of a set-top box, a personal computer, a gaming console, a laptop computer, a cell phone, a PDA and a combination device. The activity information comprises a schedule of upcoming events, is device-specific, is geographic-specific and is activity-specific. A user navigates and selects an event from the schedule of upcoming events.

In another aspect, a server device is configured to communicate with client devices in a plurality of locations wherein the server device provides location-specific activity information to the client devices, wherein the client devices each store an activity client. The server device comprises a communications interface for communicating with the client devices, an asset module for determining which assets each client device needs and a distributing module for sending the assets needed to each client device. The activity client is a program for managing activity information and data. The activity information comprises a schedule of upcoming events. The schedule of upcoming events is activity-specific. The schedule of upcoming events is device-specific. A user navigates and selects an event from the schedule of upcoming events. The server device stores a list of assets required for the client devices to run an application. The server device sends the list of assets to the client devices. The server device sends only requested assets for each client device of the client devices. The server device compares the list of assets with a list of client assets after each client device of the client devices sends the list of client assets to the server device. The server device sends only assets in the list of assets that are not in the list of client assets for each client device of the client devices.

BRIEF DESCRIPTION OF THE DRAWINGS

FIG. **1** illustrates a flowchart of an embodiment of utilizing an "Activity Client" to ensure a cell phone or other computing device is properly configured.

FIG. **2** illustrates a flowchart of an embodiment of implementing a manifest to determine needed assets for a client computing device.

FIG. **3** illustrates a flowchart of an alternative embodiment of implementing a manifest to determine needed assets for a client computing device.

FIG. **4** illustrates an exemplary manifest of the present invention.

FIG. **5** illustrates a block diagram of an embodiment of the present invention.

DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENT

A system for and method of implementing a nationwide entertainment service on computing devices and handling the issues described above are described herein. In some embodiments, the entertainment service is subscription-based. The computing devices include, but are not limited to, set-top boxes, personal computers, gaming consoles, laptop computers, cell phones, PDAs and combination devices such as cell phone/mp3 players.

There are over 200 separate television programming areas across the country. The programming offerings available depend on each individual's physical location. There are hundreds of different printed versions of the "TV Guide," and the same television programs will be viewed at different times and on different television channels depending on what Designated Market Area (DMA) a consumer is located in. Thus, the schedule of events for one person might be entirely different from another person located just a few miles away. Monthly and trial subscribers must be informed in advance which television programs will have games or other activities offered by the service concurrent with their telecast. For example, Jeopardy might start at 4 PM ET on Channel 7 in San Francisco, but in Chicago it starts at 6 PM ET on Channel 5, and 7 PM ET on Channel 13 in New York.

Furthermore, the schedules are continuously changing. The activity schedule changes often and must be updated by adding new activities as well as dropping activities which are based on TV programs that have finished airing or are too far into the program to allow entry.

Immediate entry into activities is also required, since time is of the essence in getting all of the required information processed and downloaded to the client. Moreover, since many contests or competitions are of short duration, a competitor might be put at a disadvantage if opportunities to earn points which determine the winners of prizes are missed at the start of the contest, therefore users must be permitted entry possibly seconds before the beginning of a contest, specifically a TV program-based contest. For other activities, such as surveys, time is not necessarily of the essence, but it is still beneficial to users, if they do not have long wait times before participating in an activity. As is described further below, an improved method is described to ensure users have the necessary components of the activity application residing in the memory of the cell phones or computing devices in time to play an activity from its beginning.

The legality of awarding prizes is based on 50 separate state laws. For example, Nevada and Utah have very different gaming laws. When games of skill are offered, each state's laws will define what constitutes a legal game of skill. The same game playable for prizes by a user at one location is not necessarily legal for a user across a state line which might be across the street. It is incumbent upon the entertainment service operator to abide by the laws in each of the jurisdictions where it has users.

Different software is occasionally needed for different makes and models of computing devices such as cell phones. A nationwide entertainment service has a universe of potential users who will utilize a wide variety of makes and models of cell phones. Many of these devices will have different capabilities and requirements regarding display, memory, user interface, and other technical requirements to operate the software necessary to provide such an entertainment service. Therefore, slightly different software is likely required for each separate make and model of a user's device.

A typical subscriber is able to play dozens of different TV-related activities in a week, including football, baseball, Wheel of Fortune™, The Apprentice™ and others. Most makes and models of cell phones have significant limitations on the amount of useable memory for storing downloadable application software. Therefore, a subscriber's cell phone should not be expected to hold in the temporary or permanent memory all of the software capable of running dozens of separate and discreet activity applications which might be offered by such an entertainment service. Minimizing and managing the amount of memory required to fully enjoy the entertainment service is essential.

The present invention utilizes a software application, referred to as an "Activity Client." The "Activity Client" is retained in a user's computing device's memory. A variety of methodologies are implemented for downloading the "Activity Client" into memory of the cell phone or other computing device utilized. In an embodiment, the "Activity Client" is preloaded prior to purchase by a manufacturer or carrier. In an alternative embodiment, in order to initiate the service, a subscriber once registered, selects the company's "Activity Client" from a menu on the cell phone or other computing device from a list of activities, games and other entertainment services offered by a wireless service provider such as Verizon™ Wireless or Sprint™. In some embodiments, if the activity is to be participated other than on a trial basis, registration and billing arrangements with the service will be accomplished either on the company's internet site, or by inputting registration information utilizing the cell phone or other computing device.

Upon selecting the company's service from this menu, a data connection is made to either the cellular service provider or the company's server, and the "Activity Client" is downloaded to the user's cell phone or other computing device. An example protocol implemented is TCP. In the cell phone embodiment, the process of downloading the "Activity Client" is similar to the current methods whereby discrete cell phone activities are selected, downloaded, and previewed or purchased.

In some embodiments, the downloaded "Activity Client" resides in the cell phone's compact flash memory. When the user subsequently launches the "Activity Client" on his/her cell phone or other computing device, a data connection is made to a server. After the user is authenticated and their entitlement level has been determined, the authorized and geographic-specific schedule of events is sent down to his/her phone. Using this approach, the schedule is continuously updated while the "Activity Client" is active.

The "Activity Client" in its default mode, utilizes the LCD on the cell phone to display the entertainment begin-

ning with the next scheduled activities yet to start, generally on the half hour. Since the registration process provides the service provider with the make and model of each user's phone, all "Activity Client" downloads are specific for that phone and service. Thus, for example, if a user downloads the "Activity Client" to his Samsung phone on a Verizon Wireless network, subsequent downloads to that phone will function properly as they are specifically designed for that phone.

To address the issue of numerous programming areas across the country, in one embodiment, the legally mandated ability of the cellular networks to accurately identify the physical location of every cell phone is utilized. Alternatively, and when using computing devices other than a cell phone, other information is utilized to locate the user, such as area code, zip code, or the billing address provided by the user. Based on the information acquired or provided, the server selects the specific schedule of activities, along with start times and TV channel designation for the location for this particular user. The scheduling information is downloaded into a template residing in the "Activity Client." For example, a user located in the Indianapolis, Ind. television DMA might receive a schedule which includes 9:00 pm Monday Night Football, ABC, Channel 13.

In an alternative embodiment, another methodology is utilized wherein specific scheduling information is continually broadcast to all of the users' phones, either utilizing SMS messages to "wake" the phone or, by utilizing a 3G "always on" multicast to update the schedule continually without user intervention, as long as the user's telephone is powered on.

The server, when determining the location of the cell phone, also accesses information concerning each specific activity offered as to whether or not it has been determined that the activity meets the applicable state law requirements of the game of skill for each particular participant. The user is then informed as to whether or not a prize will be offered to the competitors in this activity from their location.

In addition to containing software for enabling the continual receipt and updating of schedules and activity playing information specific to each user's geographic location, the "Activity Client" has the ability to receive and hold downloaded activity-specific data instructions from the server. Thus, when a specific activity is selected for play by the user, for example, Monday Night Football™, Wheel of Fortune™, or Major League Baseball™, the server downloads the activity-specific instructions into a memory space provided for this purpose in the "Activity Client." These activity-specific data instructions are based on the specific genre such as football, specific event such as San Francisco 49ers vs Dallas Cowboys and the specific computing device such as a wireless mobile device such as Sanyo™ 4300. Thereafter, the specific activity instructions temporarily reside inside the "Activity Client" until the next activity playing session, where it is replaced by different activity-specific data instructions selected by the user.

In an alternative embodiment, the system described herein is used to schedule and control duplicate activities of skill or chance with a common scheduled start time, played simultaneously, which are self contained, for example, not related to a television program. Examples of such include a trivia game, or classic card, dice, word games or games based on television clips.

FIG. **1** illustrates a flowchart of an embodiment of utilizing an "Activity Client" to ensure a cell phone or other computing device is properly configured. In the step **100**, a user selects from a menu provided by his web service provider or cellular service operator, for example, Verizon Wireless™, Cingular™, or Sprint™, the TV related subscription service or other service. In the step **102**, the user registers with the subscription service when necessary. For some activities, registration is required, but for others, registration is optional or not even available. After registration, if necessary, the user receives a downloaded "Activity Client" into his cell phone or other computing device, specific to the device's make and model in the step **104**. In the step **106**, to access the entertainment service, the "Activity Client" is selected by the user from the menu, and the device connects via the cellular network and/or Internet to the service provider's server. Alternatively, after the "Activity Client" is downloaded, the device automatically connects to the server. In the step **108**, the server identifies the user's status as a "trial" subscriber, "ad hoc" competitor, or "full monthly" subscriber, and identifies the specific geographic location of the user. In the step **110**, a current schedule of all available events, by name of event, TV network and channel offered, duration of event, and the nature of the prize, and where appropriate, information that indicates that the activity is able to be played for a prize in the user's locale or not, is loaded into the "Activity Client" and displayed on the device's LCD. In an alternative embodiment, once the "Activity Client" is resident on the user's device, scheduling information is continually "pushed" or "broadcast" and passively received and updated on the "Activity Client" so that it is instantly accessed, current and up to the minute. In the step **112**, the user selects the event he/she desires to play along with from a variety of possibilities presented on the device. In the step **114**, the "Activity Client" software connects to the company's server, and the activity-specific instructions for a specific device, the nature of the activity, and the specific event are downloaded into the "Activity Client." In the step **116**, the "Activity Client" then utilizes the activity interpreter resident in the "Activity Client" and starts the activity application. In the step **118**, the activity interpreter that resides in the "Activity Client" combines the activity, event, and device instructions and uses these data instructions to execute the activity application as it unfolds in real-time, synchronized with the television programming or live event being viewed by the user.

Additionally, managing different types of software assets or components required by different models of computing devices such as cell phones offered by a variety of cellular carriers or web service providers is described herein. To successfully participate in an activity of skill, based on a television show or live event, a user's cell phone needs specific software to manage, for example, the images displayed on the LCD display, the sound effects utilized by the activity, the activity scripts, the advertising copy and images which are displayed interstitially during the activity, and event-specific data generated in real-time and synchronized with the unfolding of a television show or live event. Complexity is further compounded by the fact that the assets change in minor or major part from activity to activity. For example, from football to baseball to Jeopardy™, there are changes to these assets. Some cellular phones are able to retain some or all of the assets in the phone's memory if the activity to be played was the last activity partaken by a user. Other phones retain some or part of the assets which are common to different genres of activities. Yet other phones retain none of the assets. For example, a first time user or frequent user whose assets were replaced by an upload for a different genre of activity would likely have none of the assets.

Regardless of what type of device is used and on whichever service, the present invention ensures that the application in each user's device receives all of the specific assets necessary for that particular genre of activity for a specific scheduled event while minimizing capacity and latency issues by assuring that only the necessary assets which are not resident on the device for the event are delivered on a timely basis to each cell phone. By using an implementation that only sends necessary missing data, less information needs to be transferred therefore there is less traffic congestion, and users are able to receive the necessary components on time.

Although a cell phone is used in the example above, the present invention is not limited to cell phones. As described above and below, the present invention is applicable to a variety of computing devices in addition to cellular telephones.

FIG. **2** illustrates a flowchart of an embodiment of implementing a manifest, which is a list of assets, to determine needed assets for a client computing device. In the step **200**, a user selects an activity from a menu which triggers a program in the user's client computing device which contacts a server and requests a manifest of assets, from the server, that are required to participate in a specific interactive event. The server then sends the manifest to the client, in the step **202**. In the step **204**, the client then compares the received manifest to the assets currently resident in the computing device. The client then requests from the server the assets it needs to have resident in the client to obtain a full compliment of required software necessary to participate in the activity, in the step **206**. The server then sends a package containing only the assets necessary to complete the manifest resident on the client computing device in the step **208**.

FIG. **3** illustrates a flowchart of an alternative embodiment of implementing a manifest to determine needed assets for a client computing device. Upon receiving input that a specific activity is about to be undertaken, the client sends a request to the server to retrieve all of the assets it needs for a particular activity while also sending a listing of the assets currently resident on the client, in the step **300**. The server having previously generated the manifest for the event, then compares the list of resident assets sent with the request in the step **302**, and then downloads a single packet customized for the client containing only the assets missing on the client, in the step **304**.

FIG. **4** illustrates an exemplary manifest of the present invention. Assets listed in a manifest **400**, range in necessity from those that are absolutely required to those that are preferable. To further improve efficiency when delivering components to a user's computing device, the manifest **400** is able to prioritize the assets for the client device to resolve. In some embodiments, the manifest groups the assets into two sets of assets: a first set **402** of required assets and a second set **404** of preferable assets. Furthermore, the assets within each group are able to be ordered utilizing priorities ensuring that the most important assets in the group are first. For example, the server sends the following list of assets required for an event—A, D, and (E, F and H). The assets (E, F and H) are grouped in the response so that the client knows that at least one of them is necessary for the client to join the event. Additionally, the order in which the assets are listed is able to provide additional information to the client device about their priority. For instance, in the example above, the asset E is the most preferred asset **406**, then F and finally H within the first set **402** of required assets. If the client has none of the assets, it is able to only request E, depending on the current constraints such as time remaining before the start of the event, the size of the memory on the client device and other similar considerations. Although the manifest used in the example above only has two levels and five total assets, the size of the manifest is able to be modified as desired. If three levels of groupings are preferred, then that hierarchy is able to be implemented. Furthermore, more or less than five assets are able to be included within the manifest, as appropriate.

By minimizing the amount of temporary memory utilized for each application in the client, the time necessary to load the software to play an event is decreased, and the memory of each client is used more efficiently. Thus, the server is able to minimize this overhead by only sending the assets which the client specifically needs for a specific application at a specific time. In one embodiment, the client is provided flexibility in terms of managing the assets it needs for the activities. In another embodiment, the processing that needs to be performed by the client is minimized.

FIG. **5** illustrates a block diagram of an embodiment of the present invention. A computing device **500** such as a set-top box, personal computer, gaming console, laptop computer, cell phone, PDA or combination cell phone/mp3 device includes a memory **502** for storing data. As described above, the memory **502** varies in size depending on the type and brand of computing device, where more recently produced computing devices have larger memories and are thus able to store more data. However, older computing devices only store a minimal amount of data. Within the memory an "Activity Client" **504** is stored for receiving activity-specific data **508**. The activity-specific data **508** includes instructions for a specific computing device, the nature of the activity and the specific event. By utilizing a manifest **514** received from a server **512**, wherein the manifest **514** includes assets for running the activity, the computing device **500** is able to efficiently retrieve the activity-specific data **508**. A list of needed assets **516** by the computing device **500** is sent from the computing device **500** back to the server **512**. Then, the necessary assets **518** are downloaded to the memory **502** of the computing device **500**. An activity interpreter **506** within the "Activity Client" utilizes the activity-specific data **508** to start the activity application by combining the activity, event and device instructions and executing the activity in real-time. The computing device **500** also includes a display **520**, a communication interface **522** and other standard components necessary for proper functionality. The server **512** also includes a communications interface **524** for communicating with the client device **500**, an asset module **526** for determining which assets the client device **500** needs and a distributing module **528** for sending the assets needed to the client device **500**.

The present invention is applicable to any communicating computing devices such as set-top boxes, personal computers, gaming consoles, laptop computers, cell phones, PDAs and combination devices such as cell phone/mp3 players. The computing devices must have access to a network, but are able to be wired or wireless. The computing devices also are able to be mobile or stationary. Furthermore, the network is able to include a cellular network, a web-based network or any other information sharing network.

The activities that are able to be participated in utilizing the present invention include, but are not limited to, games, polls, surveys, and other interactive activities.

In one specific embodiment, a user utilizes a wireless device, such as a cell phone to subscribe to an interactive gaming service. The user then registers with the service and downloads an "Activity Client" into the cell phone where

the "Activity Client" is specifically configured for that type of cell phone. Then, the cell phone connects through the cellular network and Internet to a game server. The game server identifies the user's status including the specific geographical location. A current schedule of all available events, by name of TV event, identification of the game to be played with the TV event, TV network and channel offered, duration of event, and the nature of the prize is then downloaded to the "Activity Client." After a user views the schedule and other information, the user is able to select the event they want to play along with. Then, the "Activity Client" connects to the game server and game-specific data is downloaded. In instances where some of the game-specific data is already downloaded in the cell phone's memory, only those assets that are not already there are downloaded. Preferably, necessary assets are downloaded first and then preferred assets are downloaded. This ensures that a user will be able to play along with the game on time. Then, the "Activity Client" utilizes the game interpreter resident to start the game. The game interpreter also combines the game, event and device instructions to execute the game in real-time while synchronized with the television programming.

The present invention is also intended to apply to any kind of application software which utilizes a variety of assets, where some of the assets are maintained on a remote server such as playing video games, listening to music and web browsing.

To utilize the present invention, a user has a computing device, such as a cell phone, or other appropriate computing device with which he is able to subscribe to an interactive entertainment service. The user then registers with the service and downloads an "Activity Client" into the computing device where the "Activity Client" is specifically configured for that type of device. Then the computing device connects through to a server. The server identifies the user's status including the specific geographical location. A current schedule of all available events, by name of TV event, identification of the activity to be played with the TV event, TV network and channel offered, duration of event, and the nature of the prize is then downloaded to the "Activity Client." After a user views the schedule and other information, the user is able to select the event they want to play along with. Then, the "Activity Client" connects to the server and activity-specific data is downloaded. In instances where some of the activity-specific data is already downloaded in the computing device's memory, only those assets that are not already there are downloaded. Preferably, necessary assets are downloaded first and then preferred assets are downloaded. This ensures that a user will be able to play along with the activity on time. Then, the "Activity Client" utilizes the activity interpreter resident to start the activity. The activity interpreter also combines the activity, event and device instructions to execute the activity in real-time while synchronized with the television programming.

In operation, a user is able to use his cell phone or other computing device to enjoy interactive entertainment. For example, the user scrolls through the menus and selects the interactive entertainment desired to be played. Thereafter, downloads occur, and instructions and options are displayed on the display so that a user is able to read about and determine which interactive entertainment he wants to play. After selecting the activity, again further downloads occur to ensure the proper components are installed on the user's computing device. For example, if it is a Sunday afternoon at 12:50 PM PT, and a user in San Francisco, Calif. sees that the San Francisco 49ers are playing the Oakland Raiders at 1:00 PM PT, he is able to select that activity to play. The user also watches the activity on television. In other embodiments, the activity is watched on other devices such as a computer, the cell phone or computing device itself, or live. At 1:00 PM PT, when the activity starts, the user is able to interactively play along with what he is viewing by predicting aspects of the activity.

Although a cell phone has been used throughout the present specification as the main exemplary computing device, it should be understood that any computing device is able to be used within the described method and system.

The present invention has been described in terms of specific embodiments incorporating details to facilitate the understanding of principles of construction and operation of the invention. Such reference herein to specific embodiments and details thereof is not intended to limit the scope of the claims appended hereto. It will be readily apparent to one skilled in the art that other various modifications may be made in the embodiment chosen for illustration without departing from the spirit and scope of the invention as defined by the claims.

What is claimed is:

1. A method of implementing a consumer service on a mobile Internet-connected computing device comprising:

loading a set of service related information located on a server to an activity client;

selecting an option from the activity client from a list of available options;

downloading a set of service-specific information related to a selected option from the server to the mobile Internet-connected computing device;

executing an application related to the selected option within the activity client on the mobile Internet-connected computing device;

receiving a list of assets necessary for executing the application from the server, wherein the assets necessary for executing the application directly affect the operation of the application;

comparing the list of assets with a first set of assets on the mobile Internet-connected computing device; and

receiving only a second set of assets within the list of assets that are not already resident on the mobile Internet-connected computing device.

2. The method of claim **1** wherein receiving only the second set of assets within the list of assets that are not already resident on the mobile Internet-connected computing device is by determining a last activity participated in by the user or a genre of the last activity participated in by the user.

3. The method of claim **1** further comprising improving efficient utilization of memory capacity by prioritizing the second set of assets.

4. The method of claim **1** wherein the second set of assets are grouped into a set of necessary assets and a set of preferred assets.

5. The method of claim **1** wherein a geographic location of the mobile Internet-connected computing device determines the set of service related information to be loaded, wherein the set of service related information includes service related information which is relative to and dependent on the geographic location of the mobile Internet-connected computing device.

6. The method of claim **5** wherein as the geographic location of the mobile Internet-connected computing device changes, different service related information is presented within the application based on the geographic location.

7. The method of claim 6 wherein the geographic location of the mobile Internet-connected computing device is determined using one or more cellular networks, GPS, GSM or other related technologies.

8. The method of claim 1 wherein the information based on the geographic location utilizes past usage of a user in connection with the geographic location.

9. The method of claim 1 wherein the server is located remotely from the mobile Internet-connected computing device.

10. The method of claim 1 wherein the assets are prioritized by frequency of use by a user.

11. The method of claim 1 wherein the assets are prioritized based on prior usage by a plurality of users.

12. The method of claim 1 wherein the assets are prioritized based on user selected parameters.

13. The method of claim 12 wherein the parameters are determined by a sponsor or advertiser of the consumer service.

14. The method of claim 1 wherein the assets are prioritized by a service provider of the consumer service.

15. The method of claim 1 wherein the assets are prioritized based on legal requirements at a current location of a user.

16. The method of claim 1 wherein the assets are prioritized based on a user profile maintained on the server.

17. The method of claim 1 wherein the assets are delivered based on a current state of the consumer service.

18. The method of claim 1 further comprising replacing unused assets to manage memory on the mobile Internet-connected computing device.

19. The method of claim 1 further comprising purging unused assets to manage memory on the mobile Internet-connected computing device.

20. A method of implementing a consumer service with a server comprising:

transmitting a set of service related information to an application;

receiving a selection related to the consumer service;

transmitting a set of selection information related to the selection from the server to a mobile Internet-connected computing device;

receiving additional information based on a user's execution of the application on the mobile Internet-connected computing device;

transmitting a list of assets necessary for executing the application, wherein the assets necessary for executing the application directly affect the operation of the application; and

transmitting only a second set of assets within the list of assets that are not already resident on the mobile Internet-connected computing device.

21. The method of claim 20 wherein transmitting only the second set of assets within the list of assets that are not already resident on the mobile Internet-connected computing device is by determining a last activity participated in by the user or a genre of the last activity participated in by the user.

22. The method of claim 20 further comprising comparing the list of assets with a first set of assets on the mobile Internet-connected computing device.

23. The method of claim 20 further comprising comparing the list of assets with a first set of assets on the server.

24. The method of claim 20 further comprising improving efficient utilization of memory capacity by prioritizing the second set of assets.

25. The method of claim 20 wherein the second set of assets are grouped into a set of necessary assets and a set of preferred assets.

26. The method of claim 20 wherein the geographic location of the mobile Internet-connected computing device determines the set of service related information to be transmitted, wherein the set of service related information includes service related information which is relative to and dependent on the geographic location of the mobile Internet-connected computing device.

27. The method of claim 26 wherein as the geographic location of the mobile Internet-connected computing device changes, different service related information is presented within the application based on the geographic location.

28. The method of claim 27 wherein the geographic location of the mobile Internet-connected computing device is determined using one or more cellular networks, GPS, GSM or other related technologies.

29. The method of claim 20 wherein the information based on the geographic location utilizes past usage of a user in connection with the geographic location.

30. The method of claim 20 wherein the server is located remotely from the mobile Internet-connected computing device.

31. The method of claim 20 wherein the assets are prioritized by frequency of use by a user.

32. The method of claim 20 wherein the assets are prioritized based on prior usage by a plurality of users.

33. The method of claim 20 wherein the assets are prioritized based on user selected parameters.

34. The method of claim 33 wherein the parameters are determined by a sponsor or advertiser of the consumer service.

35. The method of claim 20 wherein the assets are prioritized by a service provider of the consumer service.

36. The method of claim 20 wherein the assets are prioritized based on legal requirements at a current location of a user.

37. The method of claim 20 wherein the assets are prioritized based on a user profile maintained on the server.

38. The method of claim 20 wherein the assets are delivered based on a current state of the consumer service.

39. The method of claim 20 further comprising replacing unused assets to manage memory on the mobile Internet-connected computing device.

40. The method of claim 20 further comprising purging unused assets to manage memory on the mobile Internet-connected computing device.

41. A server device comprising:

a memory configured to store an application, the application configured to:

transmit a set of service related information to a mobile device application;

receive a selection related to a consumer service;

transmit a set of selection information related to the selection from the server to a mobile Internet-connected computing device;

receive additional information based on a user's execution of the mobile device application on the mobile Internet-connected computing device;

transmit a list of assets necessary for executing the consumer service, wherein the assets necessary for executing the consumer service directly affect the operation of the consumer service; and

transmit only a second set of assets within the list of assets that are not already resident on the mobile Internet-connected computing device; and

a processor configured to process the application.

42. The server device of claim **41** wherein only the second set of assets within the list of assets that are not already resident on the mobile Internet-connected computing device are transmitted by determining a last activity participated in by the user or a genre of the last activity participated in by the user.

43. The server device of claim **41** wherein the application is further configured to compare the list of assets with a first set of assets on the mobile Internet-connected computing device.

44. The server device of claim **41** wherein the application is further configured to compare the list of assets with a first set of assets on the server.

45. The server device of claim **41** wherein the application is further configured to improve efficient utilization of memory capacity by prioritizing the second set of assets.

46. The server device of claim **41** wherein the second set of assets are grouped into a set of necessary assets and a set of preferred assets.

47. The server device of claim **41** wherein a geographic location of the mobile Internet-connected computing device determines the set of service related information to be transmitted, wherein the set of service related information includes service related information which is relative to and dependent on the geographic location of the mobile Internet-connected computing device.

48. The server device of claim **47** wherein as the geographic location of the mobile Internet-connected computing device changes, different service related information is presented within the application based on the geographic location.

49. The server device of claim **48** wherein the geographic location of the mobile Internet-connected computing device is determined using one or more cellular networks, GPS, GSM or other related technologies.

50. The server device of claim **41** wherein the information based on the geographic location utilizes past usage of a user in connection with the geographic location.

51. The server device of claim **41** wherein the server is located remotely from the mobile Internet-connected computing device.

52. The server device of claim **41** wherein the assets are prioritized by frequency of use by a user.

53. The server device of claim **41** wherein the assets are prioritized based on prior usage by a plurality of users.

54. The server device of claim **41** wherein the assets are prioritized based on user selected parameters.

55. The server device of claim **54** wherein the parameters are determined by a sponsor or advertiser of the consumer service.

56. The server device of claim **41** wherein the assets are prioritized by a service provider of the consumer service.

57. The server device of claim **41** wherein the assets are prioritized based on legal requirements at a current location of a user.

58. The server device of claim **41** wherein the assets are prioritized based on a user profile maintained on the server device.

59. The server device of claim **41** wherein the assets are delivered based on a current state of the consumer service.

60. The server device of claim **41** wherein the application is further configured to replace unused assets to manage memory on the mobile Internet-connected computing device.

61. The server device of claim **41** wherein the application is further configured to purge unused assets to manage memory on the mobile Internet-connected computing device.

62. A device comprising:

a memory configured to store an application, the application configured to:

load a set of service related information located on a server to an activity client;

select an option from the activity client from a list of available options;

download a set of service-specific information related to a selected option from the server to the device;

execute the application related to the selected option within the activity client on the device;

receive a list of assets necessary for executing the application from the server, wherein the assets necessary for executing the application directly affect the operation of the application;

compare the list of assets with a first set of assets on the device; and

receive only a second set of assets within the list of assets that are not already resident on the device; and

a processor configured to process the application.

63. The device of claim **62** wherein receiving only the second set of assets within the list of assets that are not already resident on the device is by determining a last activity participated in by the user or a genre of the last activity participated in by the user.

64. The device of claim **62** wherein the application is further configured for improving efficient utilization of memory capacity by prioritizing the second set of assets.

65. The device of claim **62** wherein the second set of assets are grouped into a set of necessary assets and a set of preferred assets.

66. The device of claim **62** wherein a geographic location of the mobile Internet-connected computing device determines the set of service related information to be loaded, wherein the set of service related information includes service related information which is relative to and dependent on the geographic location of the device.

67. The device of claim **66** wherein as the geographic location of the device changes, different service related information is presented within the application based on the geographic location.

68. The device of claim **67** wherein the geographic location of the device is determined using one or more cellular networks, GPS, GSM or other related technologies.

69. The device of claim **62** wherein the information based on the geographic location utilizes past usage of a user in connection with the geographic location.

70. The device of claim **62** wherein the server is located remotely from the mobile Internet-connected computing device.

71. The device of claim **62** wherein the assets are prioritized by frequency of use by a user.

72. The device of claim **62** wherein the assets are prioritized based on prior usage by a plurality of users.

73. The device of claim **62** wherein the assets are prioritized based on user selected parameters.

74. The device of claim **73** wherein the parameters are determined by a sponsor or advertiser of the consumer service.

75. The device of claim 62 wherein the assets are prioritized by a service provider of the consumer service.

76. The device of claim 62 wherein the assets are prioritized based on legal requirements at a current location of a user.

77. The device of claim 62 wherein the assets are prioritized based on a user profile maintained on the server.

78. The device of claim 62 wherein the assets are delivered based on a current state of the consumer service.

79. The device of claim 62 wherein the application is further configured to replace unused assets to manage memory on the mobile Internet-connected computing device.

80. The device of claim 62 wherein the application is further configured to purge unused assets to manage memory on the mobile Internet-connected computing device.

81. A method of implementing a consumer service with a server comprising:

transmitting a set of service related information to an application on a mobile Internet-connected computing device;

receiving additional information based on a user's execution of the application on the mobile Internet-connected computing device;

transmitting a list of assets necessary to execute the application to the mobile Internet-connected computing device, wherein the assets necessary for executing the application directly affect the operation of the application; and

transmitting to the mobile Internet-connected computing device only a second set of assets within the list of assets that are not already resident on the mobile Internet-connected computing device.

82. The method of claim 81 wherein transmitting only the second set of assets within the list of assets that are not already resident on the mobile Internet-connected computing device is by determining a last activity participated in by the user or a genre of the last activity participated in by the user.

83. The method of claim 81 further comprising comparing the list of assets with a first set of assets on the mobile Internet-connected computing device.

84. The method of claim 81 further comprising comparing the list of assets with a first set of assets on the server.

85. The method of claim 81 further comprising improving efficient utilization of memory capacity by prioritizing the second set of assets.

86. The method of claim 81 wherein the second set of assets are grouped into a set of necessary assets and a set of preferred assets.

87. The method of claim 81 wherein the geographic location of the mobile Internet-connected computing device determines the set of service related information to be transmitted, wherein the set of service related information includes service related information which is relative to and dependent on the geographic location of the mobile Internet-connected computing device.

88. The method of claim 87 wherein as the geographic location of the mobile Internet-connected computing device changes, different service related information is presented within the application based on the geographic location.

89. The method of claim 88 wherein the geographic location of the mobile Internet-connected computing device is determined using one or more cellular networks, GPS, GSM or other related technologies.

90. The method of claim 81 wherein the information based on the geographic location utilizes past usage of a user in connection with the geographic location.

91. The method of claim 81 wherein the server is located remotely from the mobile Internet-connected computing device.

92. The method of claim 81 wherein the assets are prioritized by frequency of use by a user.

93. The method of claim 81 wherein the assets are prioritized based on prior usage by a plurality of users.

94. The method of claim 81 wherein the assets are prioritized based on user selected parameters.

95. The method of claim 94 wherein the parameters are determined by a sponsor or advertiser of the consumer service.

96. The method of claim 81 wherein the assets are prioritized by a service provider of the consumer service.

97. The method of claim 81 wherein the assets are prioritized based on legal requirements at a current location of a user.

98. The method of claim 81 wherein the assets are prioritized based on a user profile maintained on the server.

99. The method of claim 81 wherein the assets are delivered based on a current state of the consumer service.

100. The method of claim 81 further comprising replacing unused assets to manage memory on the mobile Internet-connected computing device.

101. The method of claim 81 further comprising purging unused assets to manage memory on the mobile Internet-connected computing device.

102. A server device comprising:

a memory configured to store an application, the application configured to:

transmit a set of service related information to a mobile device application on a mobile Internet-connected computing device;

receive additional information based on a user's execution of the mobile device application on the mobile Internet-connected computing device;

transmit a list of assets necessary for executing the application to the mobile Internet-connected computing device, wherein the assets necessary for executing the application directly affect the operation of the application; and

transmit to the mobile Internet-connected computing device only a second set of assets within the list of assets that are not already resident on the mobile Internet-connected computing device; and

a processor configured to process the application.

103. The server device of claim 102 wherein only the second set of assets within the list of assets that are not already resident on the mobile Internet-connected computing device are transmitted by determining a last activity participated in by the user or a genre of the last activity participated in by the user.

104. The server device of claim 102 wherein the application is further configured to compare the list of assets with a first set of assets on the mobile Internet-connected computing device.

105. The server device of claim 102 wherein the application is further configured to compare the list of assets with a first set of assets on the server.

106. The server device of claim 102 wherein the application is further configured to improve efficient utilization of memory capacity by prioritizing the second set of assets.

107. The server device of claim **102** wherein the second set of assets are grouped into a set of necessary assets and a set of preferred assets.

108. The server device of claim **102** wherein a geographic location of the mobile Internet-connected computing device determines the set of service related information to be transmitted, wherein the set of service related information includes service related information which is relative to and dependent on the geographic location of the mobile Internet-connected computing device.

109. The server device of claim **108** wherein as the geographic location of the mobile Internet-connected computing device changes, different service related information is presented within the application based on the geographic location.

110. The server device of claim **109** wherein the geographic location of the mobile Internet-connected computing device is determined using one or more cellular networks, GPS, GSM or other related technologies.

111. The server device of claim **102** wherein the information based on the geographic location utilizes past usage of a user in connection with the geographic location.

112. The server device of claim **102** wherein the server is located remotely from the mobile Internet-connected computing device.

113. The server device of claim **102** wherein the assets are prioritized by frequency of use by a user.

114. The server device of claim **102** wherein the assets are prioritized based on prior usage by a plurality of users.

115. The server device of claim **102** wherein the assets are prioritized based on user selected parameters.

116. The server device of claim **115** wherein the parameters are determined by a sponsor or advertiser of the consumer service.

117. The server device of claim **102** wherein the assets are prioritized by a service provider of the consumer service.

118. The server device of claim **102** wherein the assets are prioritized based on legal requirements at a current location of a user.

119. The server device of claim **102** wherein the assets are prioritized based on a user profile maintained on the server.

120. The server device of claim **102** wherein the assets are delivered based on a current state of the consumer service.

121. The server device of claim **102** wherein the application is further configured to replace unused assets to manage memory on the mobile Internet-connected computing device.

122. The server device of claim **102** wherein the application is further configured to purge unused assets to manage memory on the mobile Internet-connected computing device.

123. A mobile Internet-connected computing device comprising:

a memory configured to store an application, the application configured to:

load a set of service related information located on a server to an activity client;

execute the application related to a selected option within the activity client on the mobile Internet-connected computing device;

receive a list of assets necessary for executing the application from the server, wherein the assets necessary for executing the application directly affect the operation of the application;

compare the list of assets with a first set of assets on the mobile Internet-connected computing device; and

receive only a second set of assets within the list of assets that are not already resident on the mobile Internet-connected computing device; and

a processor configured to process the application.

124. The device of claim **123** wherein receiving only the second set of assets within the list of assets that are not already resident on the mobile Internet-connected computing device is by determining a last activity participated in by the user or a genre of the last activity participated in by the user.

125. The device of claim **123** wherein the application is further configured for improving efficient utilization of memory capacity by prioritizing the second set of assets.

126. The device of claim **123** wherein the second set of assets are grouped into a set of necessary assets and a set of preferred assets.

127. The device of claim **123** wherein a geographic location of the mobile Internet-connected computing device determines the set of service related information to be loaded, wherein the set of service related information includes service related information which is relative to and dependent on the geographic location of the mobile Internet-connected computing device.

128. The device of claim **127** wherein as the geographic location of the mobile Internet-connected computing device changes, different service related information is presented within the application based on the geographic location.

129. The device of claim **128** wherein the geographic location of the mobile Internet-connected computing device is determined using one or more cellular networks, GPS, GSM or other related technologies.

130. The device of claim **123** wherein the information based on the geographic location utilizes past usage of a user in connection with the geographic location.

131. The device of claim **123** wherein the server is located remotely from the mobile Internet-connected computing device.

132. The device of claim **123** wherein the assets are prioritized by frequency of use by a user.

133. The device of claim **123** wherein the assets are prioritized based on prior usage by a plurality of users.

134. The device of claim **123** wherein the assets are prioritized based on user selected parameters.

135. The device of claim **134** wherein the parameters are determined by a sponsor or advertiser of the consumer service.

136. The device of claim **123** wherein the assets are prioritized by a service provider of the consumer service.

137. The device of claim **123** wherein the assets are prioritized based on legal requirements at a current location of a user.

138. The device of claim **123** wherein the assets are prioritized based on a user profile maintained on the server.

139. The device of claim **124** wherein the assets are delivered based on a current state of the consumer service.

140. The device of claim **125** wherein the application is further configured to replace unused assets to manage memory on the mobile Internet-connected computing device.

141. The device of claim **126** wherein the application is further configured to purge unused assets to manage memory on the mobile Internet-connected computing device.

142. The method of claim **1** wherein the second set of assets are prioritized based on an amount of time remaining before a start of an event.

143. The method of claim **20** wherein the second set of assets are prioritized based on an amount of time remaining before a start of an event.

144. The server device of claim **41** wherein the second set of assets are prioritized based on an amount of time remaining before a start of an event.

145. The device of claim **62** wherein the second set of assets are prioritized based on an amount of time remaining before a start of an event.

146. The method of claim **81** wherein the second set of assets are prioritized based on an amount of time remaining before a start of an event.

147. The server device of claim **102** wherein the second set of assets are prioritized based on an amount of time remaining before a start of an event.

148. The device of claim **123** wherein the second set of assets are prioritized based on an amount of time remaining before a start of the first event or the second event.

* * * * *

Exhibit 5

US011678020B2

(12) **United States Patent**
Lockton et al.

(10) **Patent No.: US 11,678,020 B2**
(45) **Date of Patent: *Jun. 13, 2023**

(54) **METHODOLOGY FOR EQUALIZING SYSTEMIC LATENCIES IN TELEVISION RECEPTION IN CONNECTION WITH GAMES OF SKILL PLAYED IN CONNECTION WITH LIVE TELEVISION PROGRAMMING**

(71) Applicant: **Winview, Inc.**, Redwood City, CA (US)

(72) Inventors: **David B. Lockton**, Redwood City, CA (US); **Mark K. Berner**, Santa Clara, CA (US); **Mark J. Micheli**, San Francisco, CA (US); **David Lowe**, Foster City, CA (US)

(73) Assignee: **Winview, Inc.**, Redwood City, CA (US)

(*) Notice: Subject to any disclaimer, the term of this patent is extended or adjusted under 35 U.S.C. 154(b) by 0 days.

This patent is subject to a terminal disclaimer.

(21) Appl. No.: **17/531,596**

(22) Filed: **Nov. 19, 2021**

(65) **Prior Publication Data**

US 2022/0080306 A1 Mar. 17, 2022

Related U.S. Application Data

(60) Continuation of application No. 16/749,864, filed on Jan. 22, 2020, now Pat. No. 11,179,632, which is a (Continued)

(51) **Int. Cl.**
A63F 13/50 (2014.01)
H04N 21/478 (2011.01)
(Continued)

(52) **U.S. Cl.**
CPC ***H04N 21/4781*** (2013.01); ***A63F 13/216*** (2014.09); ***A63F 13/22*** (2014.09);
(Continued)

(58) **Field of Classification Search**
CPC A63F 13/50
See application file for complete search history.

(56) **References Cited**

U.S. PATENT DOCUMENTS

2,831,105 A 4/1958 Parker
3,562,650 A 2/1971 Gossard et al.
(Continued)

FOREIGN PATENT DOCUMENTS

CA 2252074 11/1997
CA 2252021 11/1998
(Continued)

OTHER PUBLICATIONS

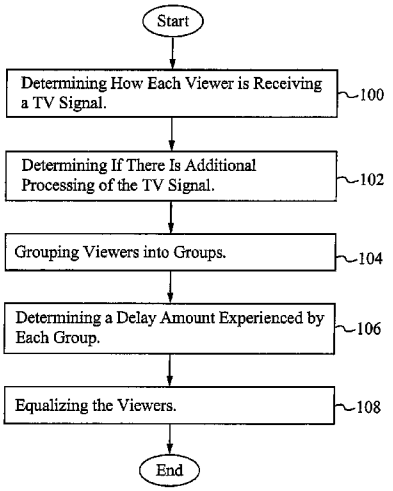
Pinnacle, "The basics of reverse line movement," Jan. 19, 2018, Retrieved on Jan. 22, 2020 , http://www.pinnacle.com/en/belting-articles educational/basics-of-reverse-line-movement/QAH26XGGQQS7M3GD.
(Continued)

Primary Examiner — Seng H Lim
(74) *Attorney, Agent, or Firm* — Haverstock & Owens, A Law Corporation

(57) **ABSTRACT**

A method of and system for handling latency issues encountered in producing real-time entertainment such as games of skill synchronized with live or taped televised events is described herein. There are multiple situations that are dealt with regarding latencies in receiving a television signal with respect to real-time entertainment based on the unfolding games played along with the telecasts. Systemic delays, arbitrarily imposed delays of a broadcast signal and variances in the precise broadcast times of taped television programs have to be equalized so as to provide fair entertainment.

43 Claims, 5 Drawing Sheets



Related U.S. Application Data

continuation of application No. 16/177,118, filed on Oct. 31, 2018, now Pat. No. 10,874,942, which is a continuation of application No. 15/900,438, filed on Feb. 20, 2018, now Pat. No. 10,150,031, which is a continuation of application No. 15/648,101, filed on Jul. 12, 2017, now Pat. No. 9,919,211, which is a continuation of application No. 15/263,186, filed on Sep. 12, 2016, now Pat. No. 9,744,453, which is a division of application No. 14/172,571, filed on Feb. 4, 2014, now Pat. No. 9,604,140, which is a continuation of application No. 13/681,172, filed on Nov. 19, 2012, now Pat. No. 8,699,168, which is a division of application No. 13/403,845, filed on Feb. 23, 2012, now Pat. No. 8,717,701, which is a continuation of application No. 11/786,992, filed on Apr. 12, 2007, now Pat. No. 8,149,530.

(60) Provisional application No. 60/791,793, filed on Apr. 12, 2006.

(51) **Int. Cl.**

A63F 13/358	(2014.01)
A63F 13/335	(2014.01)
A63F 13/332	(2014.01)
A63F 13/216	(2014.01)
A63F 13/795	(2014.01)
A63F 13/338	(2014.01)
H04N 21/472	(2011.01)
H04N 21/61	(2011.01)
H04N 5/04	(2006.01)
H04N 21/436	(2011.01)
H04N 21/27	(2011.01)
H04N 21/43	(2011.01)
H04N 21/435	(2011.01)
A63F 13/22	(2014.01)
A63F 13/92	(2014.01)
H04N 21/2385	(2011.01)
H04N 21/258	(2011.01)
H04N 21/442	(2011.01)
H04N 21/45	(2011.01)
A63F 13/32	(2014.01)
A63F 13/285	(2014.01)
H04N 21/24	(2011.01)

(52) **U.S. Cl.**

CPC ***A63F 13/285*** (2014.09); ***A63F 13/32*** (2014.09); ***A63F 13/332*** (2014.09); ***A63F 13/335*** (2014.09); ***A63F 13/338*** (2014.09); ***A63F 13/358*** (2014.09); ***A63F 13/50*** (2014.09); ***A63F 13/795*** (2014.09); ***A63F 13/92*** (2014.09); ***H04N 5/04*** (2013.01); ***H04N 21/2385*** (2013.01); ***H04N 21/24*** (2013.01); ***H04N 21/25866*** (2013.01); ***H04N 21/27*** (2013.01); ***H04N 21/4302*** (2013.01); ***H04N 21/435*** (2013.01); ***H04N 21/43615*** (2013.01); ***H04N 21/44209*** (2013.01); ***H04N 21/4508*** (2013.01); ***H04N 21/47217*** (2013.01); ***H04N 21/6131*** (2013.01); *A63F 2300/406* (2013.01); *A63F 2300/407* (2013.01); *A63F 2300/409* (2013.01); *A63F 2300/534* (2013.01)

(56) **References Cited**

U.S. PATENT DOCUMENTS

4,141,548	A	2/1979	Everton
4,270,755	A	6/1981	Willhide et al.
4,386,377	A	5/1983	Hunter, Jr.
4,496,148	A	1/1985	Morstain et al.
4,521,803	A	6/1985	Glittinger
4,592,546	A	6/1986	Fascenda et al.
4,816,904	A	3/1989	McKenna et al.
4,918,603	A	4/1990	Hughes et al.
4,930,010	A	5/1990	MacDonald
5,013,038	A	5/1991	Luvenberg
5,018,736	A	5/1991	Pearson et al.
5,035,422	A	7/1991	Berman
5,073,931	A	12/1991	Audebert et al.
5,083,271	A	1/1992	Thatcher et al.
5,083,800	A	1/1992	Lockton
5,119,295	A	6/1992	Kapur
5,120,076	A	6/1992	Luxenberg et al.
5,213,337	A	5/1993	Sherman
5,227,874	A	7/1993	Von Kohom
5,256,863	A	10/1993	Ferguson
5,263,723	A	11/1993	Pearson et al.
5,283,734	A	2/1994	Von Kohom
5,327,485	A	7/1994	Leaden
5,343,236	A	8/1994	Koppe et al.
5,343,239	A	8/1994	Lappington et al.
5,417,424	A	5/1995	Snowden
5,462,275	A	10/1995	Lowe et al.
5,479,492	A	12/1995	Hofstee et al.
5,488,659	A	1/1996	Millani
5,519,433	A	5/1996	Lappington
5,530,483	A	6/1996	Cooper
5,553,120	A	9/1996	Katz
5,566,291	A	10/1996	Boulton et al.
5,585,975	A	12/1996	Bliss
5,586,257	A	12/1996	Perlman
5,589,765	A	12/1996	Ohmart et al.
5,594,938	A	1/1997	Engel
5,618,232	A	4/1997	Martin
5,628,684	A	5/1997	Jean-Etienne
5,636,920	A	6/1997	Shur et al.
5,638,113	A	6/1997	Lappington
5,643,088	A	7/1997	Vaughn et al.
5,663,757	A	9/1997	Morales
5,759,101	A	6/1998	Won Kohom
5,761,606	A	6/1998	Wolzien
5,762,552	A	6/1998	Voung et al.
5,764,275	A	6/1998	Lappington et al.
5,794,210	A	8/1998	Goldhaber et al.
5,805,230	A	9/1998	Staron
5,813,913	A	9/1998	Berner et al.
5,818,438	A	10/1998	Howe et al.
5,828,843	A	10/1998	Grimm
5,838,774	A	11/1998	Weiser, Jr.
5,838,909	A	11/1998	Roy
5,846,132	A	12/1998	Junkin
5,848,397	A	12/1998	Marsh et al.
5,860,862	A	1/1999	Junkin
5,894,556	A	4/1999	Grimm
5,916,024	A	6/1999	Von Kohom
5,870,683	A	9/1999	Wells et al.
5,970,143	A	10/1999	Schneier et al.
5,971,854	A	10/1999	Pearson et al.
5,987,440	A	11/1999	O'Neil et al.
6,009,458	A	12/1999	Hawkins et al.
6,015,344	A	1/2000	Kelly et al.
6,016,337	A	1/2000	Pykalisto
6,038,599	A	3/2000	Black
6,042,477	A	3/2000	Addink
6,064,449	A	5/2000	White
6,104,815	A	8/2000	Alcorn et al.
6,110,041	A	8/2000	Walker et al.
6,117,013	A	9/2000	Elba
6,126,543	A	10/2000	Friedman
6,128,660	A	10/2000	Grimm
6,135,881	A	10/2000	Abbott et al.
6,154,131	A	11/2000	Jones, II
6,174,237	B1	1/2001	Stephenson
6,182,084	B1	1/2001	Cockrell et al.
6,193,610	B1	2/2001	Junkin
6,222,642	B1	4/2001	Farrell et al.
6,233,736	B1	5/2001	Wolzien

(56) **References Cited**

U.S. PATENT DOCUMENTS

6,251,017 B1 6/2001 Leason et al.
6,267,670 B1 7/2001 Walker
6,287,199 B1 9/2001 McKeown et al.
6,293,868 B1 9/2001 Bernard
6,312,336 B1 11/2001 Handelman et al.
6,343,320 B1 1/2002 Fairchild
6,345,297 B1 2/2002 Grimm
6,371,855 B1 4/2002 Gavriloff
6,373,462 B1 4/2002 Pan
6,411,969 B1 6/2002 Tam
6,416,414 B1 7/2002 Stadelmann
6,418,298 B1 7/2002 Sonnenfeld
6,425,828 B2 7/2002 Walker et al.
6,434,398 B1 8/2002 Inselberg
6,446,262 B1 9/2002 Malaure et al.
6,470,180 B1 10/2002 Kotzin et al.
6,475,090 B2 11/2002 Gregory
6,524,189 B1 2/2003 Rautila
6,527,641 B1 3/2003 Sinclair et al.
6,530,082 B1 3/2003 Del Sesto et al.
6,536,037 B1 3/2003 Guheen et al.
6,578,068 B1 6/2003 Bowma-Amuah
6,594,098 B1 7/2003 Sutardja
6,604,997 B2 7/2003 Saidakovsky et al.
6,610,953 B1 8/2003 Tao et al.
6,611,755 B1 8/2003 Coffee et al.
6,648,760 B1 11/2003 Nicastro
6,659,860 B1 12/2003 Yamamoto et al.
6,659,861 B1 12/2003 Faris
6,659,872 B1 12/2003 Kaufman et al.
6,690,661 B1 2/2004 Agarwal et al.
6,697,869 B1 2/2004 Mallart
6,718,350 B1 4/2004 Karbowski
6,752,396 B2 6/2004 Smith
6,758,754 B1 7/2004 Lavanchy et al.
6,758,755 B2 7/2004 Kelly et al.
6,760,595 B2 7/2004 Insellberg
6,763,377 B1 7/2004 Balknap et al.
6,766,524 B1 7/2004 Matheny et al.
6,774,926 B1 8/2004 Ellis et al.
6,785,561 B1 8/2004 Kim
6,801,380 B1 10/2004 Saturdja
6,806,889 B1 10/2004 Malaure et al.
6,807,675 B1 10/2004 Millard et al.
6,811,482 B2 11/2004 Letovsky
6,811,487 B2 11/2004 Sengoku
6,816,628 B1 11/2004 Sarachik et al.
6,817,947 B2 11/2004 Tanskanen
6,824,469 B2 11/2004 Allibhoy et al.
6,837,789 B2 1/2005 Garahi et al.
6,837,791 B1 1/2005 McNutt et al.
6,840,861 B2 1/2005 Jordan et al.
6,845,389 B1 1/2005 Sen
6,846,239 B2 1/2005 Washio
6,857,122 B1 2/2005 Takeda et al.
6,863,610 B2 3/2005 Vancraeynest
6,870,720 B2 3/2005 Iwata et al.
6,871,226 B1 3/2005 Ensley et al.
6,873,610 B1 3/2005 Noever
6,884,166 B2 4/2005 Leen et al.
6,884,172 B1 4/2005 Lloyd et al.
6,887,159 B2 5/2005 Leen et al.
6,888,929 B1 5/2005 Saylor
6,893,347 B1 5/2005 Zilliacus et al.
6,898,762 B2 5/2005 Ellis et al.
6,899,628 B2 5/2005 Leen et al.
6,903,681 B2 6/2005 Faris
6,908,389 B1 6/2005 Puskala
6,942,574 B1 9/2005 LeMay et al.
6,944,228 B1 9/2005 Dakss et al.
6,960,088 B1 11/2005 Long
6,978,053 B1 12/2005 Sarachik et al.
7,001,279 B1 2/2006 Barber et al.
7,029,394 B2 4/2006 Leen et al.
7,035,626 B1 4/2006 Luciano, Jr.
7,035,653 B2 4/2006 Simon et al.
7,058,592 B1 6/2006 Heckerman et al.
7,076,434 B1 7/2006 Newman et al.
7,085,552 B2 8/2006 Buckley
7,116,310 B1 10/2006 Evans et al.
7,117,517 B1 10/2006 Milazzo et al.
7,120,924 B1 10/2006 Katcher et al.
7,124,410 B2 10/2006 Berg
7,125,336 B2 10/2006 Anttila et al.
7,136,871 B2 11/2006 Ozer et al.
7,144,011 B2 12/2006 Asher et al.
7,169,050 B1 1/2007 Tyler
7,185,355 B1 2/2007 Ellis
7,187,658 B2 3/2007 Koyanagi
7,191,447 B1 3/2007 Ellis et al.
7,192,352 B2 3/2007 Walker et al.
7,194,758 B1 3/2007 Waki et al.
7,228,349 B2 6/2007 Barone, Jr. et al.
7,231,630 B2 6/2007 Acott et al.
7,233,922 B2 6/2007 Asher et al.
7,240,093 B1 7/2007 Danieli et al.
7,244,181 B2 7/2007 Wang et al.
7,249,367 B2 7/2007 Bove, Jr. et al.
7,254,605 B1 8/2007 Strum
7,260,782 B2 8/2007 Wallace et al.
RE39,818 E 9/2007 Slifer
7,283,830 B2 10/2007 Buckley
7,288,027 B2 10/2007 Overton
7,341,517 B2 3/2008 Asher et al.
7,343,617 B1 3/2008 Kartcher et al.
7,347,781 B2 3/2008 Schultz
7,351,149 B1 4/2008 Simon et al.
7,367,042 B1 4/2008 Dakss et al.
7,379,705 B1 5/2008 Rados et al.
7,389,144 B1 6/2008 Osorio
7,430,718 B2 9/2008 Gariepy-Viles
7,452,273 B2 11/2008 Amaitis et al.
7,460,037 B2 12/2008 Cattone et al.
7,461,067 B2 12/2008 Dewing et al.
7,502,610 B2 3/2009 Maher
7,510,474 B2 3/2009 Carter, Sr.
7,517,282 B1 4/2009 Pryor
7,534,169 B2 5/2009 Amaitis et al.
7,543,052 B1 6/2009 Cesa Klein
7,562,134 B1 7/2009 Fingerhut et al.
7,602,808 B2 10/2009 Ullmann
7,610,330 B1 10/2009 Quinn
7,614,944 B1 11/2009 Hughes et al.
7,630,986 B1 12/2009 Herz et al.
7,693,781 B2 4/2010 Asher et al.
7,699,707 B2 4/2010 Bahou
7,702,723 B2 4/2010 Dyl
7,711,628 B2 5/2010 Davie et al.
7,729,286 B2 6/2010 Mishra
7,753,772 B1 7/2010 Walker
7,753,789 B2 7/2010 Walker et al.
7,780,528 B2 8/2010 Hirayama
7,828,661 B1 11/2010 Fish
7,835,961 B2 11/2010 Davie et al.
7,860,993 B2 12/2010 Chintala
7,886,003 B2 2/2011 Newman
7,907,211 B2 3/2011 Oostveen et al.
7,907,598 B2 3/2011 Anisimov
7,909,332 B2 3/2011 Root
7,925,756 B1 4/2011 Riddle
7,926,810 B2 4/2011 Fisher et al.
7,937,318 B2 5/2011 Davie et al.
7,941,482 B2 5/2011 Bates
7,941,804 B1 5/2011 Herington
7,976,389 B2 7/2011 Cannon et al.
8,002,618 B1 8/2011 Lockton
8,006,314 B2 8/2011 Wold
8,025,565 B2 9/2011 Leen et al.
8,028,315 B1 9/2011 Barber
8,082,150 B2 12/2011 Wold
8,086,445 B2 12/2011 Wold et al.
8,086,510 B2 12/2011 Amaitis et al.
8,092,303 B2 1/2012 Amaitis et al.
8,092,306 B2 1/2012 Root

(56) **References Cited**

U.S. PATENT DOCUMENTS

8,105,141 B2 1/2012 Leen et al.
8,107,674 B2 1/2012 Davis et al.
8,109,827 B2 2/2012 Cahill et al.
8,128,474 B2 3/2012 Amaitis et al.
8,147,313 B2 4/2012 Amaitis et al.
8,147,373 B2 4/2012 Amaitis et al.
8,149,530 B1 4/2012 Lockton et al.
8,155,637 B2 4/2012 Fujisawa
8,162,759 B2 4/2012 Yamaguchi
8,176,518 B1 5/2012 Junkin et al.
8,186,682 B2 5/2012 Amaitis et al.
8,204,808 B2 6/2012 Amaitis et al.
8,219,617 B2 7/2012 Ashida
8,240,669 B2 8/2012 Asher et al.
8,246,048 B2 8/2012 Asher et al.
8,267,403 B2 9/2012 Fisher et al.
8,342,924 B2 1/2013 Leen et al.
8,342,942 B2 1/2013 Amaitis et al.
8,353,763 B2 1/2013 Amaitis et al.
8,376,855 B2 2/2013 Lockton et al.
8,396,001 B2 3/2013 Jung
8,397,257 B1 3/2013 Barber
8,465,021 B2 6/2013 Asher et al.
8,473,393 B2 6/2013 Davie et al.
8,474,819 B2 7/2013 Asher et al.
8,535,138 B2 9/2013 Amaitis et al.
8,538,563 B1 9/2013 Barber
8,543,487 B2 9/2013 Asher et al.
8,555,313 B2 10/2013 Newnam
8,556,691 B2 10/2013 Leen et al.
8,585,490 B2 11/2013 Amaitis et al.
8,622,798 B2 1/2014 Lockton et al.
8,632,392 B2 1/2014 Shore et al.
8,634,943 B2 1/2014 Root
8,638,517 B2 1/2014 Lockton et al.
8,641,511 B2 2/2014 Ginsberg et al.
8,659,848 B2 2/2014 Lockton et al.
8,672,751 B2 3/2014 Leen et al.
8,699,168 B2 4/2014 Lockton et al.
8,705,195 B2 4/2014 Lockton
8,708,789 B2 4/2014 Asher et al.
8,717,701 B2 5/2014 Lockton et al.
8,727,352 B2 5/2014 Amaitis et al.
8,734,227 B2 5/2014 Leen et al.
8,737,004 B2 5/2014 Lockton et al.
8,738,694 B2 5/2014 Huske et al.
8,771,058 B2 7/2014 Alderucci et al.
8,780,482 B2 7/2014 Lockton et al.
8,805,732 B2 8/2014 Davie et al.
8,813,112 B1 8/2014 Cibula et al.
8,814,664 B2 8/2014 Amaitis et al.
8,817,408 B2 8/2014 Lockton et al.
8,837,072 B2 9/2014 Lockton et al.
8,849,225 B1 9/2014 Choti
8,849,255 B2 9/2014 Choti
8,858,313 B1 10/2014 Selfors
8,870,639 B2 10/2014 Lockton et al.
8,935,715 B2 1/2015 Cibula et al.
9,056,251 B2 6/2015 Lockton
9,067,143 B2 6/2015 Lockton et al.
9,069,651 B2 6/2015 Barber
9,076,303 B1 7/2015 Park
9,098,883 B2 8/2015 Asher et al.
9,111,417 B2 8/2015 Leen et al.
9,205,339 B2 12/2015 Cibula et al.
9,233,293 B2 1/2016 Lockton
9,258,601 B2 2/2016 Lockton et al.
9,270,789 B2 2/2016 Huske et al.
9,289,692 B2 3/2016 Barber
9,306,952 B2 4/2016 Burman et al.
9,314,686 B2 4/2016 Lockton
9,314,701 B2 4/2016 Lockton et al.
9,355,518 B2 5/2016 Amaitis et al.
9,406,189 B2 8/2016 Scott et al.
9,430,901 B2 8/2016 Amaitis et al.
9,457,272 B2 10/2016 Lockton et al.
9,498,724 B2 11/2016 Lockton et al.
9,501,904 B2 11/2016 Lockton
9,504,922 B2 11/2016 Lockton et al.
9,511,287 B2 12/2016 Lockton et al.
9,526,991 B2 12/2016 Lockton et al.
9,536,396 B2 1/2017 Amaitis et al.
9,556,991 B2 1/2017 Furuya
9,604,140 B2 3/2017 Lockton et al.
9,652,937 B2 5/2017 Lockton
9,662,576 B2 5/2017 Lockton et al.
9,662,577 B2 5/2017 Lockton et al.
9,672,692 B2 6/2017 Lockton
9,687,738 B2 6/2017 Lockton et al.
9,687,739 B2 6/2017 Lockton et al.
9,707,482 B2 7/2017 Lockton et al.
9,716,918 B1 7/2017 Lockton et al.
9,724,603 B2 8/2017 Lockton et al.
9,744,453 B2 8/2017 Lockton et al.
9,805,549 B2 10/2017 Asher et al.
9,821,233 B2 11/2017 Lockton et al.
9,878,243 B2 1/2018 Lockton et al.
9,881,337 B2 1/2018 Jaycobs et al.
9,901,820 B2 2/2018 Lockton et al.
9,908,053 B2 3/2018 Lockton et al.
9,919,210 B2 3/2018 Lockton
9,919,211 B2 3/2018 Lockton et al.
9,919,221 B2 3/2018 Lockton et al.
9,978,217 B2 5/2018 Lockton
9,993,730 B2 6/2018 Lockton et al.
9,999,834 B2 6/2018 Lockton et al.
10,052,557 B2 8/2018 Lockton et al.
10,089,815 B2 10/2018 Asher et al.
10,096,210 B2 10/2018 Amaitis et al.
10,137,369 B2 11/2018 Lockton et al.
10,150,031 B2 12/2018 Lockton et al.
10,165,339 B2 12/2018 Huske et al.
10,186,116 B2 1/2019 Lockton
10,195,526 B2 2/2019 Lockton et al.
10,226,698 B1 3/2019 Lockton et al.
10,226,705 B2 3/2019 Lockton et al.
10,232,270 B2 3/2019 Lockton et al.
10,248,290 B2 4/2019 Galfond
10,279,253 B2 5/2019 Lockton
10,360,767 B2 7/2019 Russell et al.
10,569,175 B2 2/2020 Kosai et al.
10,653,955 B2 5/2020 Lockton
10,695,672 B2 6/2020 Lockton et al.
10,709,987 B2 7/2020 Lockton et al.
10,721,543 B2 7/2020 Huske et al.
10,981,070 B2 4/2021 Isgreen
2001/0004609 A1 6/2001 Walker et al.
2001/0005670 A1 6/2001 Lahtinen
2001/0013067 A1 8/2001 Koyanagi
2001/0013125 A1 8/2001 Kitsukawa et al.
2001/0020298 A1 9/2001 Rector, Jr. et al.
2001/0032333 A1 10/2001 Flickinger
2001/0036272 A1 11/2001 Hirayama
2001/0036853 A1 11/2001 Thomas
2001/0044339 A1 11/2001 Cordero
2001/0054019 A1 12/2001 de Fabrega
2002/0010789 A1 1/2002 Lord
2002/0018477 A1 2/2002 Katz
2002/0026321 A1 2/2002 Faris
2002/0029381 A1 3/2002 Inselberg
2002/0035609 A1 3/2002 Lessard
2002/0037766 A1 3/2002 Muniz
2002/0069265 A1 3/2002 Bountour
2002/0042293 A1 4/2002 Ubale et al.
2002/0046099 A1 4/2002 Frengut et al.
2002/0054088 A1 5/2002 Tanskanen et al.
2002/0055385 A1 5/2002 Otsu
2002/0056089 A1 5/2002 Houston
2002/0059094 A1 5/2002 Hosea et al.
2002/0059623 A1 5/2002 Rodriguez et al.
2002/0069076 A1 6/2002 Faris
2002/0076084 A1 6/2002 Tian
2002/0078176 A1 6/2002 Nomura et al.
2002/0083461 A1 6/2002 Hutcheson

(56) **References Cited**

U.S. PATENT DOCUMENTS

2002/0091833 A1 7/2002 Grimm
2002/0094869 A1 7/2002 Harkham
2002/0095333 A1 7/2002 Jokinen et al.
2002/0097983 A1 7/2002 Wallace et al.
2002/0099709 A1 7/2002 Wallace
2002/0100063 A1 7/2002 Herigstad et al.
2002/0103696 A1 8/2002 Huang et al.
2002/0105535 A1 8/2002 Wallace et al.
2002/0107073 A1 8/2002 Binney
2002/0108112 A1 8/2002 Wallace et al.
2002/0108125 A1 8/2002 Joao
2002/0108127 A1 8/2002 Lew et al.
2002/0112249 A1 8/2002 Hendricks et al.
2002/0115488 A1 8/2002 Berry et al.
2002/0119821 A1 8/2002 Sen
2002/0120930 A1 8/2002 Yona
2002/0124247 A1 9/2002 Houghton
2002/0132614 A1 9/2002 Vanlujit et al.
2002/0133817 A1 9/2002 Markel
2002/0133827 A1 9/2002 Newman et al.
2002/0142843 A1 10/2002 Roelofs
2002/0144273 A1 10/2002 Reto
2002/0147049 A1 10/2002 Carter, Sr.
2002/0157002 A1 10/2002 Messerges et al.
2002/0157005 A1 10/2002 Bunk
2002/0159576 A1 10/2002 Adams
2002/0162031 A1 10/2002 Levin et al.
2002/0162117 A1 10/2002 Pearson
2002/0165020 A1 11/2002 Koyama
2002/0165025 A1 11/2002 Kawahara
2002/0177483 A1 11/2002 Cannon
2002/0184624 A1 12/2002 Spencer
2002/0187825 A1 12/2002 Tracy
2002/0198050 A1 12/2002 Patchen
2003/0002638 A1 1/2003 Kaars
2003/0003997 A1 1/2003 Vuong et al.
2003/0013528 A1 1/2003 Allibhoy et al.
2003/0023547 A1 1/2003 France
2003/0040363 A1 2/2003 Sandberg
2003/0054885 A1 3/2003 Pinto et al.
2003/0060247 A1 3/2003 Goldberg et al.
2003/0066089 A1 4/2003 Anderson
2003/0069828 A1 4/2003 Blazey et al.
2003/0070174 A1 4/2003 Solomon
2003/0078924 A1 4/2003 Liechty et al.
2003/0086691 A1 5/2003 Yu
2003/0087652 A1 5/2003 Simon et al.
2003/0088648 A1 5/2003 Bellaton
2003/0114224 A1 6/2003 Anttila et al.
2003/0115152 A1 6/2003 Flaherty
2003/0125109 A1 7/2003 Green
2003/0134678 A1 7/2003 Tanaka
2003/0144017 A1 7/2003 Inselberg
2003/0154242 A1 8/2003 Hayes et al.
2003/0165241 A1 9/2003 Fransdonk
2003/0177167 A1 9/2003 Laage et al.
2003/0177504 A1 9/2003 Paulo et al.
2003/0189668 A1 10/2003 Newman et al.
2003/0195023 A1 10/2003 Di Cesare
2003/0195807 A1 10/2003 Maggio
2003/0208579 A1 11/2003 Brady et al.
2003/0211856 A1 11/2003 Zilliacus
2003/0212691 A1 11/2003 Kuntala et al.
2003/0216185 A1 11/2003 Varley
2003/0216857 A1 11/2003 Feldman et al.
2003/0228866 A1 12/2003 Pezeshki
2003/0233425 A1 12/2003 Lyons et al.
2004/0005919 A1 1/2004 Walker et al.
2004/0014524 A1 1/2004 Pearlman
2004/0015442 A1 1/2004 Hmlinen
2004/0022366 A1 2/2004 Ferguson et al.
2004/0025190 A1 2/2004 McCalla
2004/0056897 A1 3/2004 Ueda
2004/0060063 A1 3/2004 Russ et al.
2004/0073915 A1 4/2004 Dureau
2004/0088729 A1 5/2004 Petrovic et al.
2004/0093302 A1 5/2004 Baker et al.
2004/0152454 A1 5/2004 Kauppinen
2004/0107138 A1 6/2004 Maggio
2004/0117831 A1 6/2004 Ellis et al.
2004/0117839 A1 6/2004 Watson et al.
2004/0128319 A1 7/2004 Davis et al.
2004/0139158 A1 7/2004 Datta
2004/0139482 A1 7/2004 Hale
2004/0148638 A1 7/2004 Weisman et al.
2004/0152517 A1 8/2004 Haedisty
2004/0152519 A1 8/2004 Wang
2004/0158855 A1 8/2004 Gu et al.
2004/0162124 A1 8/2004 Barton
2004/0166873 A1 8/2004 Simic
2004/0176162 A1 9/2004 Rothschild
2004/0178923 A1 9/2004 Kuang
2004/0183824 A1 9/2004 Benson
2004/0185881 A1 9/2004 Lee
2004/0190779 A1 9/2004 Sarachik et al.
2004/0198495 A1 10/2004 Cisneros et al.
2004/0201626 A1 10/2004 Lavoie
2004/0203667 A1 10/2004 Shroder
2004/0203898 A1 10/2004 Bodin et al.
2004/0210507 A1 10/2004 Asher et al.
2004/0215756 A1 10/2004 VanAntwerp
2004/0216161 A1 10/2004 Barone, Jr. et al.
2004/0216171 A1 10/2004 Barone, Jr. et al.
2004/0224750 A1 11/2004 Ai-Ziyoud
2004/0242321 A1 12/2004 Overton
2004/0266513 A1 12/2004 Odom
2005/0005303 A1 1/2005 Barone et al.
2005/0021942 A1 1/2005 Diehl et al.
2005/0026699 A1 2/2005 Kinzer et al.
2005/0028208 A1 2/2005 Ellis
2005/0043094 A1 2/2005 Nguyen et al.
2005/0060219 A1 3/2005 Ditering et al.
2005/0076371 A1 4/2005 Nakamura
2005/0077997 A1 4/2005 Landram
2005/0097599 A1 5/2005 Potnick et al.
2005/0101309 A1 5/2005 Croome
2005/0113164 A1 5/2005 Buecheler et al.
2005/0003878 A1 6/2005 Updike
2005/0131984 A1 6/2005 Hofmann et al.
2005/0138668 A1 6/2005 Gray et al.
2005/0144102 A1 6/2005 Johnson
2005/0155083 A1 7/2005 Oh
2005/0177861 A1 8/2005 Ma et al.
2005/0210526 A1 9/2005 Levy et al.
2005/0216838 A1 9/2005 Graham
2005/0235043 A1 10/2005 Teodosiu et al.
2005/0239551 A1 10/2005 Griswold
2005/0255901 A1 11/2005 Kreutzer
2005/0256895 A1 11/2005 Dussault
2005/0266869 A1 12/2005 Jung
2005/0267969 A1 12/2005 Poikselka et al.
2005/0273804 A1 12/2005 Preisman
2005/0283800 A1 12/2005 Ellis et al.
2005/0288080 A1 12/2005 Lockton et al.
2005/0288101 A1 12/2005 Lockton et al.
2005/0288812 A1 12/2005 Cheng
2006/0020700 A1 1/2006 Qiu
2006/0025070 A1 2/2006 Kim et al.
2006/0046810 A1 3/2006 Tabata
2006/0047772 A1 3/2006 Crutcher
2006/0053390 A1 3/2006 Gariepy-Viles
2006/0058103 A1 3/2006 Danieli
2006/0059161 A1 3/2006 Millett et al.
2006/0063590 A1 3/2006 Abassi et al.
2006/0082068 A1 4/2006 Patchen
2006/0087585 A1 4/2006 Seo
2006/0089199 A1 4/2006 Jordan et al.
2006/0094409 A1 5/2006 Inselberg
2006/0101492 A1 5/2006 Lowcock
2006/0111168 A1 5/2006 Nguyen
2006/0135253 A1 6/2006 George et al.
2006/0148569 A1 7/2006 Beck
2006/0156371 A1 7/2006 Maetz et al.
2006/0160597 A1 7/2006 Wright

(56) **References Cited**

U.S. PATENT DOCUMENTS

2006/0174307 A1 8/2006 Hwang et al.
2006/0183547 A1 8/2006 McMonigle
2006/0183548 A1 8/2006 Morris et al.
2006/0190654 A1 8/2006 Joy
2006/0205483 A1 9/2006 Meyer et al.
2006/0205509 A1 9/2006 Hirota
2006/0205510 A1 9/2006 Lauper
2006/0217198 A1 9/2006 Johnson
2006/0236352 A1 10/2006 Scott, III
2006/0248553 A1 11/2006 Mikkelson et al.
2006/0248564 A1 11/2006 Zinevitch
2006/0256865 A1 11/2006 Westerman
2006/0256868 A1 11/2006 Westerman
2006/0269120 A1 11/2006 Nehmadi et al.
2006/0285586 A1 12/2006 Westerman
2007/0004516 A1 1/2007 Jordan et al.
2007/0013547 A1 1/2007 Boaz
2007/0019826 A1 1/2007 Horbach et al.
2007/0028272 A1 2/2007 Lockton
2007/0037623 A1 2/2007 Romik
2007/0054695 A1 3/2007 Huske et al.
2007/0078009 A1 4/2007 Lockton et al.
2007/0083920 A1 4/2007 Mizoguchi et al.
2007/0086465 A1 4/2007 Paila et al.
2007/0087832 A1 4/2007 Abbott
2007/0093296 A1 4/2007 Asher
2007/0106721 A1 5/2007 Schloter
2007/0107010 A1 5/2007 Jolna et al.
2007/0129144 A1 6/2007 Katz
2007/0147870 A1 7/2007 Nagashima et al.
2007/0162328 A1 7/2007 Reich
2007/0183744 A1 8/2007 Koizumi
2007/0197247 A1 8/2007 Inselberg
2007/0210908 A1 9/2007 Putterman et al.
2007/0219856 A1 9/2007 Ahmad-Taylor
2007/0222652 A1 9/2007 Cattone et al.
2007/0226062 A1 9/2007 Hughes et al.
2007/0238525 A1 10/2007 Suomela
2007/0243936 A1 10/2007 Binenstock et al.
2007/0244570 A1 10/2007 Speiser et al.
2007/0244585 A1 10/2007 Speiser et al.
2007/0244749 A1 10/2007 Speiser et al.
2007/0265089 A1 11/2007 Robarts
2007/0294410 A1 12/2007 Pandya
2008/0005037 A1 1/2008 Hammad
2008/0013927 A1 1/2008 Kelly et al.
2008/0051201 A1 2/2008 Lore
2008/0066129 A1 3/2008 Katcher et al.
2008/0076497 A1 3/2008 Kiskis et al.
2008/0104630 A1 5/2008 Bruce
2008/0146337 A1 6/2008 Halonen
2008/0169605 A1 7/2008 Shuster et al.
2008/0222672 A1 9/2008 Piesing
2008/0240681 A1 10/2008 Fukushima
2008/0248865 A1 10/2008 Tedesco
2008/0270288 A1 10/2008 Butterly et al.
2008/0288600 A1 11/2008 Clark
2009/0011781 A1 1/2009 Merrill et al.
2009/0094632 A1 4/2009 Newman et al.
2009/0103892 A1 4/2009 Hirayama
2009/0186676 A1 7/2009 Amaitis et al.
2009/0163271 A1 9/2009 George et al.
2009/0228351 A1 9/2009 Rijsenbrij
2009/0234674 A1 9/2009 Wurster
2009/0264188 A1 10/2009 Soukup
2009/0271512 A1 10/2009 Jorgensen
2009/0325716 A1 12/2009 Harari
2010/0099421 A1 4/2010 Patel et al.
2010/0099471 A1 4/2010 Feeney et al.
2010/0107194 A1 4/2010 McKissick et al.
2010/0120503 A1 5/2010 Hoffman et al.
2010/0137057 A1 6/2010 Fleming
2010/0203936 A1 8/2010 Levy
2010/0279764 A1 11/2010 Allen et al.
2010/0296511 A1 11/2010 Prodan
2011/0016224 A1 1/2011 Riley
2011/0053681 A1 3/2011 Goldman
2011/0065490 A1 3/2011 Lutnick
2011/0081958 A1 4/2011 Herman
2011/0116461 A1 5/2011 Holt
2011/0130197 A1 6/2011 Bythar et al.
2011/0227287 A1 9/2011 Reabe
2011/0269548 A1 11/2011 Barclay et al.
2011/0306428 A1 12/2011 Lockton et al.
2012/0058808 A1 3/2012 Lockton
2012/0115585 A1 5/2012 Goldman
2012/0157178 A1 6/2012 Lockton
2012/0264496 A1 10/2012 Behrman et al.
2012/0282995 A1 11/2012 Allen et al.
2012/0295686 A1 11/2012 Lockton
2013/0005453 A1 1/2013 Nguyen et al.
2013/0072271 A1 3/2013 Lockton et al.
2013/0079081 A1 3/2013 Lockton et al.
2013/0079092 A1 3/2013 Lockton et al.
2013/0079093 A1 3/2013 Lockton et al.
2013/0079135 A1 3/2013 Lockton et al.
2013/0079150 A1 3/2013 Lockton et al.
2013/0079151 A1 3/2013 Lockton et al.
2013/0196774 A1 8/2013 Lockton et al.
2013/0225285 A1 8/2013 Lockton
2013/0225299 A1 8/2013 Lockton
2014/0031134 A1 1/2014 Lockton et al.
2014/0100011 A1 4/2014 Gingher
2014/0106832 A1 4/2014 Lockton et al.
2014/0128139 A1 5/2014 Shuster et al.
2014/0155130 A1 6/2014 Lockton et al.
2014/0155134 A1 6/2014 Lockton
2014/0206446 A1 7/2014 Lockton et al.
2014/0237025 A1 8/2014 Huske et al.
2014/0248952 A1 9/2014 Cibula et al.
2014/0256432 A1 9/2014 Lockton et al.
2014/0279439 A1 9/2014 Brown
2014/0287832 A1 9/2014 Lockton et al.
2014/0309001 A1 10/2014 Root
2014/0335961 A1 11/2014 Lockton et al.
2014/0335962 A1 11/2014 Lockton et al.
2014/0378212 A1 12/2014 Sims
2015/0011310 A1 1/2015 Lockton et al.
2015/0024814 A1 1/2015 Root
2015/0067732 A1 3/2015 Howe et al.
2015/0148130 A1 5/2015 Cibula et al.
2015/0238839 A1 8/2015 Lockton
2015/0238873 A1 8/2015 Amone et al.
2015/0258452 A1 9/2015 Lockton et al.
2015/0356831 A1 12/2015 Osibodu
2016/0023116 A1 1/2016 Wire
2016/0045824 A1 2/2016 Lockton et al.
2016/0049049 A1 2/2016 Lockton
2016/0054872 A1 2/2016 Cibula et al.
2016/0082357 A1 3/2016 Lockton
2016/0121208 A1 5/2016 Lockton et al.
2016/0134947 A1 5/2016 Huske et al.
2016/0217653 A1 7/2016 Meyer
2016/0271501 A1 9/2016 Balsbaugh
2016/0361647 A1 12/2016 Lockton et al.
2016/0375362 A1 12/2016 Lockton et al.
2017/0036110 A1 2/2017 Lockton et al.
2017/0036117 A1 2/2017 Lockton et al.
2017/0043259 A1 2/2017 Lockton et al.
2017/0053498 A1 2/2017 Lockton
2017/0065891 A1 3/2017 Lockton et al.
2017/0098348 A1 4/2017 Odom
2017/0103615 A1 4/2017 Theodosopoulos
2017/0128840 A1 5/2017 Croci
2017/0221314 A1 8/2017 Lockton
2017/0225071 A1 8/2017 Lockton et al.
2017/0225072 A1 8/2017 Lockton et al.
2017/0232340 A1 8/2017 Lockton
2017/0243438 A1 8/2017 Merati
2017/0249801 A1 8/2017 Malek
2017/0252649 A1 9/2017 Lockton et al.
2017/0259173 A1 9/2017 Lockton et al.
2017/0264961 A1 9/2017 Lockton
2017/0282067 A1 10/2017 Lockton et al.

(56) **References Cited**

U.S. PATENT DOCUMENTS

2017/0296916	A1	10/2017	Lockton et al.
2017/0304726	A1	10/2017	Lockton et al.
2017/0345260	A1	11/2017	Strause
2018/0025586	A1	1/2018	Lockton
2018/0071637	A1	3/2018	Baazov
2018/0104582	A1	4/2018	Lockton et al.
2018/0104596	A1	4/2018	Lockton et al.
2018/0117464	A1	5/2018	Lockton et al.
2018/0140955	A1	5/2018	Lockton et al.
2018/0154255	A1	6/2018	Lockton
2018/0169523	A1	6/2018	Lockton et al.
2018/0190077	A1	7/2018	Hall
2018/0236359	A1	8/2018	Lockton et al.
2018/0243652	A1	8/2018	Lockton et al.
2018/0264360	A1	9/2018	Lockton et al.
2018/0300988	A1	10/2018	Lockton
2018/0318710	A1	11/2018	Lockton et al.
2019/0054375	A1	2/2019	Lockton et al.
2019/0060750	A1	2/2019	Lockton et al.
2019/0143225	A1	5/2019	Baazov

FOREIGN PATENT DOCUMENTS

CA	2279069		7/1999
CA	2287617		10/1999
EP	0649102	A3	6/1996
GB	2364485		1/2002
JP	11-46356		2/1999
JP	11-239183		8/1999
JP	2000-165840		6/2000
JP	2000-217094		8/2000
JP	2000-358255		12/2000
JP	2001-28743		1/2001
JP	2000-209563		7/2008
NZ	330242		10/1989
WO	01/039506	A2	5/2001
WO	01/65743	A1	9/2001
WO	02/03698	A1	10/2002
WO	2005064506	A1	7/2005
WO	2006004855		1/2006
WO	2006004856		1/2006
WO	2007002284		1/2007
WO	2007016575		2/2007
WO	2007041667		4/2007
WO	2008027811	A2	3/2008
WO	2008115858	A1	9/2008

OTHER PUBLICATIONS

Gambling Commission,"Virtual currencies, eSports and social casino gaming-position paper," Mar. 2017, Retrieved on Jan. 22, 2020, http://gamblingcomission.gov.uk/PDF/Virtual-currencies-eSports-and -social-casino-gaming.pdf.

Sipko et al.,"Machine learning for the prediction of professional tennis matches/" In: MEng computing-final year project, Imperial College London, Jun. 15, 2015, http://www.doc.ic.ac.uk/teaching/distinguished-projects/2015/m.sipko.pdf.

Winview Game Producer, "Live TV Sports Play Along App WinView Games Announces Sponsorship With PepsiCo to Start This Holiday Season," In Winview Games. Dec. 21, 2016, Retrieved on Jan. 21, 2020 from , http://www. winviewgames./press-release/live-tv-sports-play-along-app-winview-games-announces-sponsorship-pepsico-start-holiday-season/.

International Search Report and The Written Opinion for the PCT/US2019/054859 dated Feb. 4, 2020.

International Preliminary Report dated Apr. 22, 2021 for the application PCT/US2019/054859.

Fantasysport-Wikipedia.pdf, https://en.wikepedia.org/w/index.php?title=Fantasy_sport&oldid=685260969(Year:2015).

Two Way TV Patent and Filing Map www.twowaytv.com/version4/technologies/tech_patents.asp.

Ark 4.0 Standard Edition, Technical Overview www.twowaytv.com/version4/technologies/tech_ark_professionals.asp.

"Understanding the Interactivity Between Television and Mobile commerce", Robert Davis and David Yung, Communications of the ACM, Jul. 2005, vol. 48, No. 7, pp. 103-105.

"Re: Multicast Based Voting System" www.ripe.net/ripe/maillists/archives/mbone-eu-op/1997/msg00100html.

"IST and Sportal.com: Live on the Internet Sep. 14, 2004 by Clare Spoonheim", www.isk.co.usk/NEWS/dotcom/ist_sportal.html.

"Modeling User Behavior in Networked Games byTristan Henderson and Saleem Bhatti", www.woodworm.cs.uml.edu/rprice/ep/henderson.

"SMS Based Voting and Survey System for Meetings", www.abbit.be/technology/SMSSURVEY.html.

"PurpleAce Launches 3GSM Ringtone Competition", www.wirelessdevnet.com/news/2005/jan/31/news6html.

"On the Perfomance of Protocols for collecting Responses over a Multiple-Access Channel", Mostafa H. Ammar and George N. Rouskas, IEEE INCOMFORM '91, pp. 1490-1499, vol. 3, IEEE, New York, NY.

Merriam-Webster, "Game" definition, <http://www.merriam-webster.com/dictionary/agme.pg.1.

Ducheneaut et al.,"The Social Side of Gaming: A Study of Interaction Patterns in a Massively Multiplayer Online Game", Palo Alto Research Center, Nov. 2004, vol. 6, Issue 4, pp. 360-369.

http://help.yahoo.com/help/us/tourn/tourn-03.html.

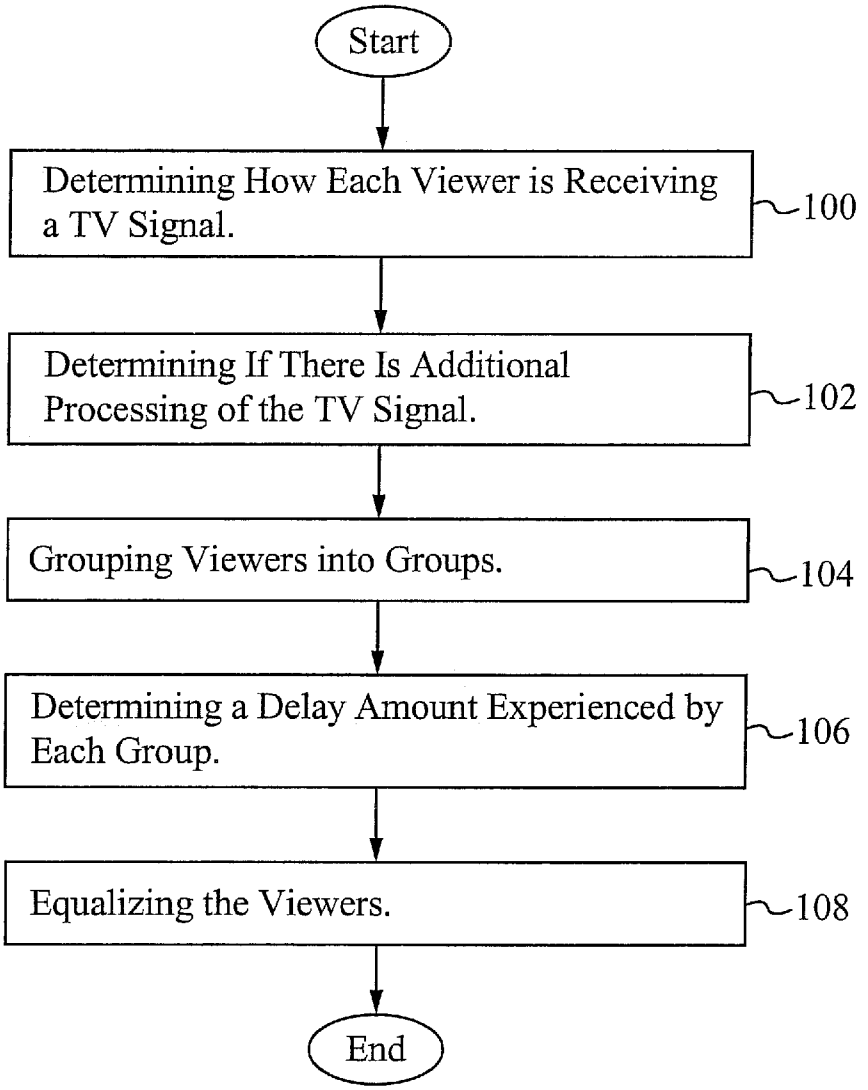

Start
Determining How Each Viewer is Receiving a TV Signal.
100
Determining If There Is Additional Processing of the TV Signal.
102
Grouping Viewers into Groups.
104
Determining a Delay Amount Experienced by Each Group.
106
Equalizing the Viewers.
108
End

Fig. 1

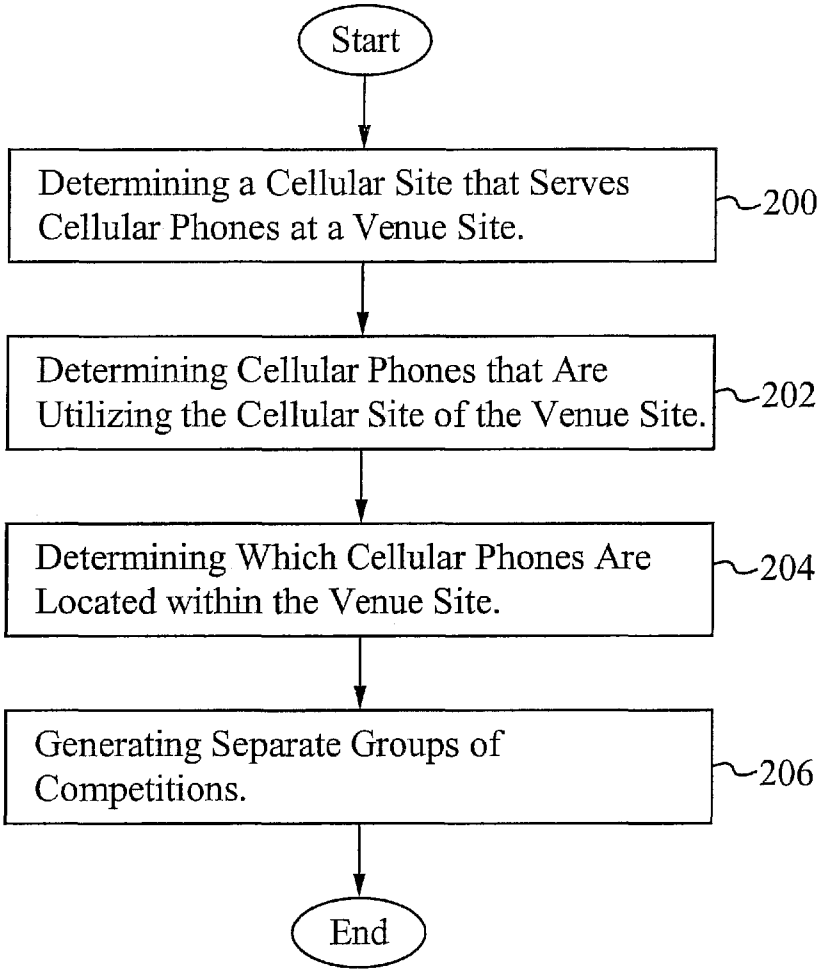

Start
Determining a Cellular Site that Serves Cellular Phones at a Venue Site.
200
Determining Cellular Phones that Are Utilizing the Cellular Site of the Venue Site.
202
Determining Which Cellular Phones Are Located within the Venue Site.
204
Generating Separate Groups of Competitions.
206
End

Fig. 2

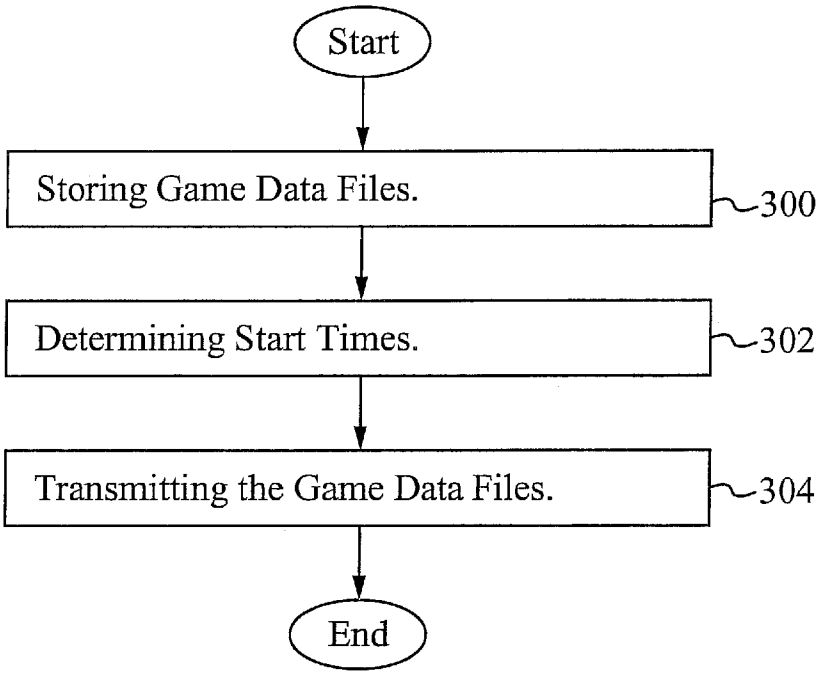

Start
Storing Game Data Files.
300
Determining Start Times.
302
Transmitting the Game Data Files.
304
End

Fig. 3

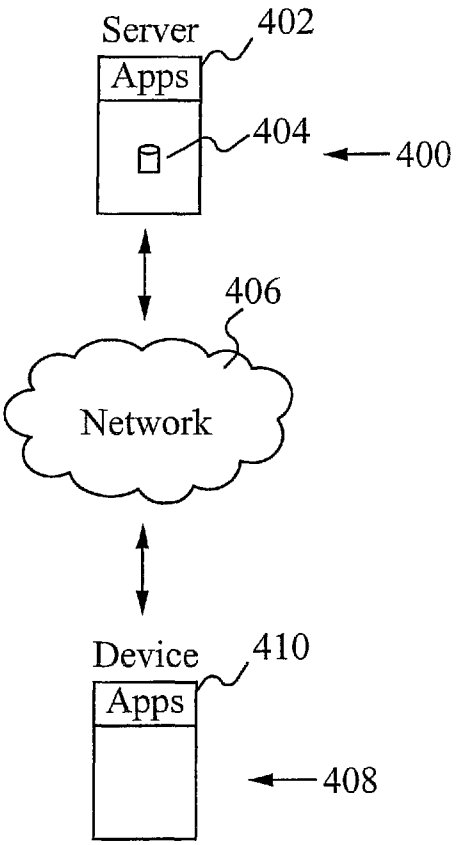


Fig. 4

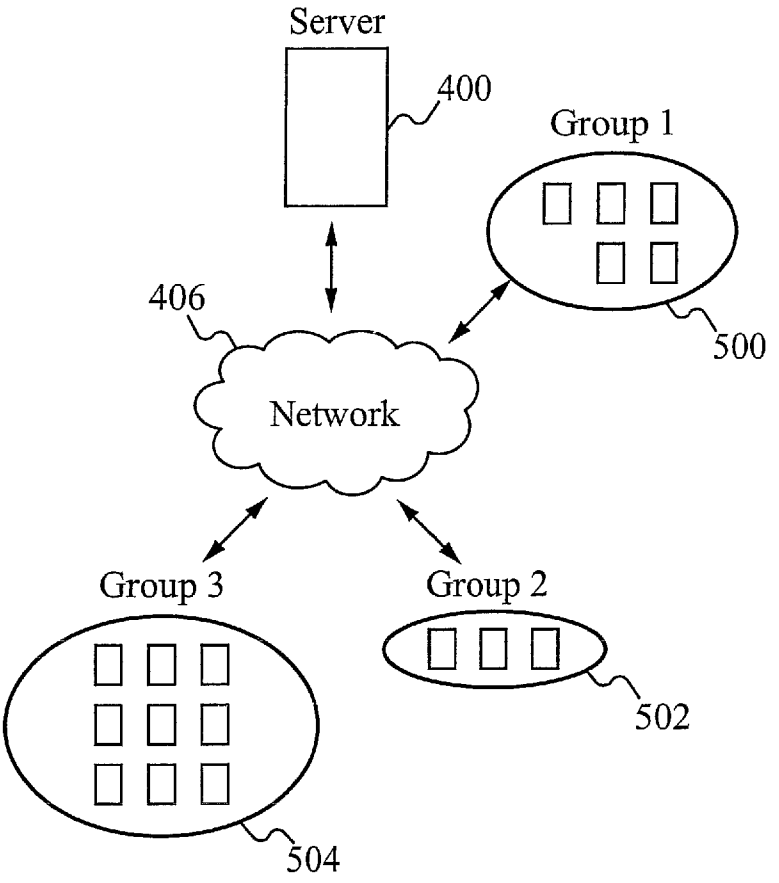


Fig. 5

METHODOLOGY FOR EQUALIZING SYSTEMIC LATENCIES IN TELEVISION RECEPTION IN CONNECTION WITH GAMES OF SKILL PLAYED IN CONNECTION WITH LIVE TELEVISION PROGRAMMING

RELATED APPLICATION(S)

This Patent Application is a continuation application of U.S. patent application Ser. No. 16/749,864, filed Jan. 22, 2020, titled "A METHODOLOGY FOR EQUALIZING SYSTEMIC LATENCIES IN TELEVISION RECEPTION IN CONNECTION WITH GAMES OF SKILL PLAYED IN CONNECTION WITH LIVE TELEVISION PROGRAMMING", which is a continuation of U.S. patent application Ser. No. 16/177,118, filed Oct. 31, 2018, titled "A METHODOLOGY FOR EQUALIZING SYSTEMIC LATENCIES IN TELEVISION RECEPTION IN CONNECTION WITH GAMES OF SKILL PLAYED IN CONNECTION WITH LIVE TELEVISION PROGRAMMING", which is a continuation application of U.S. patent application Ser. No. 15/900,438, filed Feb. 20, 2018, titled "A METHODOLOGY FOR EQUALIZING SYSTEMIC LATENCIES IN TELEVISION RECEPTION IN CONNECTION WITH GAMES OF SKILL PLAYED IN CONNECTION WITH LIVE TELEVISION PROGRAMMING", which is a continuation of U.S. patent application Ser. No. 15/648,101, filed Jul. 12, 2017, titled "A METHODOLOGY FOR EQUALIZING SYSTEMIC LATENCIES IN TELEVISION RECEPTION IN CONNECTION WITH GAMES OF SKILL PLAYED IN CONNECTION WITH LIVE TELEVISION PROGRAMMING," which is a continuation application of U.S. patent application Ser. No. 15/263,186, filed Sep. 12, 2016, titled, "A METHODOLOGY FOR EQUALIZING SYSTEMIC LATENCIES IN TELEVISION RECEPTION IN CONNECTION WITH GAMES OF SKILL PLAYED IN CONNECTION WITH LIVE TELEVISION PROGRAMMING," which is a divisional application of U.S. patent application Ser. No. 14/172,571, filed Feb. 4, 2014, titled, "A METHODOLOGY FOR EQUALIZING SYSTEMIC LATENCIES IN TELEVISION RECEPTION IN CONNECTION WITH GAMES OF SKILL PLAYED IN CONNECTION WITH LIVE TELEVISION PROGRAMMING," which is a continuation of U.S. patent application Ser. No. 13/681,172, filed Nov. 19, 2012, titled, "A METHODOLOGY FOR EQUALIZING SYSTEMIC LATENCIES IN TELEVISION RECEPTION IN CONNECTION WITH GAMES OF SKILL PLAYED IN CONNECTION WITH LIVE TELEVISION PROGRAMMING," which is a divisional of U.S. patent application Ser. No. 13/403,845, filed Feb. 23, 2012, titled, "A METHODOLOGY FOR EQUALIZING SYSTEMIC LATENCIES IN TELEVISION RECEPTION IN CONNECTION WITH GAMES OF SKILL PLAYED IN CONNECTION WITH LIVE TELEVISION PROGRAMMING," which is a continuation of U.S. patent application Ser. No. 11/786,992, filed Apr. 12, 2007, (now U.S. Pat. No. 8,149,530), titled, "A METHODOLOGY FOR EQUALIZING SYSTEMIC LATENCIES IN TELEVISION RECEPTION IN CONNECTION WITH GAMES OF SKILL PLAYED IN CONNECTION WITH LIVE TELEVISION PROGRAMMING," which claims priority under 35 U.S.C. § 119(e) of the co-owned U.S. Provisional Patent Application No. 60/791,793, filed Apr. 12, 2006, and titled "A METHODOLOGY FOR EQUALIZING SYSTEMIC LATENCIES IN TELEVISION RECEPTION IN CONNECTION WITH GAMES OF SKILL PLAYED IN CONNECTION WITH LIVE TELEVISION PROGRAMMING" which are also all hereby incorporated by reference in their entireties.

FIELD OF THE INVENTION

The present invention relates to the field of distributed gaming. More specifically, the present invention relates to the field of distributed gaming utilizing a mobile device.

BACKGROUND OF THE INVENTION

In the United States alone there are over 170 million registered cellular phones. With the expiration of the U.S. Pat. No. 4,592,546 to Fascenda and Lockton, companies are able to now use the cellular phone and other mobile communication devices utilizing a multicast network to control television viewers in games of skill based upon predicting, for example, what the quarterback may call on the next play within a football game. Both prime time and programs syndicated on a market-by-market basis lend themselves to games of skill. In addition, games of skill with a common start time can be conducted simultaneously among cellular phone owners, based on classic card, dice, trivia, and other games. In order to avoid the anti-gaming laws in the various states, the winners must be determined by the relative skill, experience and practice of the player in each discrete game.

U.S. Pat. No. 5,813,913 ('913) to Berner and Lockton provides for a central computing system which includes a means of grouping participants having similar skill levels together in simultaneous, but separate, levels of competition playing an identical game. The relative performances are communicated to only those participants competing at the same skill level. The '913 patent also provides for a wireless receiving device to permanently store the specific skill level for each participant for each type of common event such as those based on televised sports or game shows. The '913 patent provides for a telephonic link at the completion of the game to collect information and update the skill level of the participants of a particular game. When a person achieves sufficient points or meets other objective criteria to graduate into another skill level, a method is provided for accomplishing this in the central computer and then transmitting an alert to the participant notifying them of their promotion. The '913 patent describes awarding prizes and providing recognition for the members of each discreet skill level in a common game. All users, no matter what level they are on, receive the same number of questions and thus the possibility of earning the same number of points. Thus direct comparisons between users at different levels, although not encouraged are possible. Such comparisons between players of disparate skills can lead to user discouragement.

Games of skill and chance have an intrinsic excitement and entertainment value. Any game is greatly enhanced by a participant's ability to know how their performance compares in relation to other participants and/or to historical performance for the game throughout the contest. As with any game of skill, competition among friends, or with strangers of similar experience, or the ability at ones option, sometimes for an extra consideration, to compete in a separate team or individual contest, offers the opportunity of increased enjoyment and prizes.

Games of skill that rely on participation by watching an event on a television have potential latency issues since television signal reception is not synchronized nationwide. For example, a participant in Texas using a satellite dish

network may experience a 3 second delay compared to an individual in California using a cable network. Also, there are delays between individuals attending a game live and those watching the game live on television. Furthermore, for taped programs, both those shown to viewers in time zones or those syndicated on a market-by-market basis, there are potential delay issues as experienced with the live broadcasts in addition to other possible differences in timing of the broadcasts. Therefore, to maintain user enjoyment and fairness for all participants, these delays must be neutralized.

SUMMARY OF THE INVENTION

A method of and system for handling latency issues encountered in producing real-time entertainment such as games of skill synchronized with live or taped televised events is described herein. There are multiple situations that are dealt with regarding latencies in receiving a television signal with respect to real-time entertainment based on the unfolding games played along with the telecasts. Systemic delays, arbitrarily imposed delays of a broadcast signal and variances in the precise broadcast times of taped television programs have to be equalized so as to provide fair entertainment.

In one aspect, a method of equalizing effects of latency differences in a game of skill comprises grouping participants into a set of cohorts viewing a telecast delivered by identical transmission and reception systems, determining an amount of delay for each cohort in the set of cohorts and substantially equalizing the set of cohorts through adjustment of the amount of delay. The method further comprises determining how each participant receives a television signal. How each participant receives a television signal is selected from the group consisting of an over the air broadcast, a cable system and a satellite system. The participants are grouped based on how the participants receive a television signal. The method further comprises determining if there is additional processing of a television signal in a reception location. The additional processing occurs within a participant's location selected from the group consisting of a public place, a home, an office and a bar. Since each cable system may impose different delay at their head-ends, the specific cable provider is identified. Determining the amount of delay comprises one or more of requiring the participants to answer questions related to their television system service, requiring the participants to mark on a game playing client device, a precise time that a predetermined audio or visual event is viewed on a television program, utilizing a GPS function in a cellular phone to determine a physical location of each of the participants, utilizing an employee of a game producer who is a member of each cohort in the set of cohorts to determine the amount of delay, inserting an artifact in the telecast in which the participants respond to, and establishing the amount of delay through an automated system which samples an audio or video track of a satellite, cable or over the air broadcast television signal, linked to a game server, to provide information related to a precise arrival of an underlying television picture. An average is taken when requiring participants to mark the precise time the predetermined audio or visual event is viewed on the television program. Equalizing the set of cohorts comprises at least one of time stamping the amount of delay on a game lock out signal, imposing the amount of delay on an entire game data stream and sending game control data to the participant cohorts at the same time where client software delays presentation of game data based on a precise time of reception of the telecast by the group.

In another aspect, a method of preventing a first set of participants at a live event from having an advantage over a second set of participants watching the live event on television comprises determining a cellular site that serves a set of cellular phones at a venue site, determining the set of cellular phones that are utilizing the cellular site of the venue site, determining a subset of cellular phones within the set of cellular phones that are located within the venue site and generating separate groups of competitions based on the subset of cellular phones within the set of cellular phones that are located within the venue site. A first group within the separate groups of competitions includes only the first set of participants and a second group within the separate groups of competitions includes only the second set of participants. An application on a server determines the cellular site, the set of cellular phones utilizing the cellular site and the subset of cellular phones located within the venue site. An application on each cellular phone within the subset of cellular phones determines if the cellular phone is located within the venue site.

In another aspect, a method of equalizing effects of latency issues with a taped television broadcast comprises storing a set of data files on a server, determining one or more start times and transmitting the set of files from the server to each mobile device at a transmission time corresponding to an appropriate start time for the mobile device. An application starts using the set of files at the one or more start times. The set of data files are game data files. Determining the one or more start times includes at least one of utilizing an employee of a game provider based on visual observation of a telecast, utilizing at least one of an audio and video recognition system with online access to the broadcast for each separate market which provides real-time tracking of the broadcast to the server, adding at least one of an audio and video event in the television broadcast which is recognizable at a starting point, designating at least one of the audio and video event in the television broadcast which is recognizable as the starting point, utilizing an audio signal, inserted within the broadcast recognizable by an audio receiver of the mobile device, and using a vertical blanking interval.

In yet another aspect, a system for equalizing effects of latency issues for a game of skill comprises a mobile device and a server coupled to the mobile device wherein the server sends a lockout signal at an appropriate time based on a measured amount of delay to prevent a user from submitting a response after they see the outcome. The mobile device is within a group of mobile devices. The server determines which group the mobile device is in. The server stores game control data and transmits the game control data to the mobile device. The game control data includes delay information for implementing the lockout signal. The server contains a location determination application for determining the location of the mobile device. The mobile device contains a location determination application for determining the location of the mobile device. Variances in delays in receiving the television signal determine delays in transmitting applicable data files within a television signal reception path

In another aspect, a device for equalizing effects of latency issues for a game of skill comprises a storage device and a set of applications contained within the storage device for sending a lockout signal at an appropriate time based on a measured amount of delay to prevent a user from submitting a response after they see the outcome. The set of applications determines which group mobile devices coupled to the device are in. The device stores game control

data and transfers the game control data to mobile devices. The game control data includes delay information for implementing the lockout signal. The set of applications includes a location application for determining the location of mobile devices. The amount of delay accounts for delays within a television signal reception path.

A network of devices comprises a plurality of mobile devices and a server coupled to the mobile devices wherein the server groups the plurality of mobile devices into a set of cohorts and wherein the server sends a lockout signal at an appropriate time based on an amount of delay to prevent users from submitting a response after they see the outcome. Each cohort within the set of cohorts is based on a signal reception path. The signal reception path is selected from the group consisting of an over the air network, a cable network and a satellite network. The server stores game control data and transfers the game control data to each mobile device within the plurality of mobile devices. The game control data is specific for each cohort within the set of cohorts. The game control data includes delay information for equalizing the lockout signal. The amount of delay accounts for delays within a television signal reception path.

BRIEF DESCRIPTION OF THE DRAWINGS

FIG. **1** illustrates a flowchart of a process of preventing latency issues from giving an advantage to some participants.

FIG. **2** illustrates a flowchart of a process of preventing participants at a live event from having an unfair advantage over participants watching on television.

FIG. **3** illustrates a flowchart of a process of handling latency issues for taped programs.

FIG. **4** illustrates a graphical representation of an embodiment of the present invention.

FIG. **5** illustrates a graphical representation of a network of devices of the present invention.

DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENT

U.S. Provisional Patent Application No. 60/692,356, filed Jun. 20, 2005, and entitled "SYSTEMS AND METHODOLOGIES ENABLING A CELL PHONE BASED SUBSCRIPTION SERVICE OFFERING A VARIETY OF SCHEDULED GAMES IN CONNECTION WITH LIVE TELEVISION PROGRAMMING," is incorporated by reference herein.

The present invention addresses three separate classes of latency issues for the length of time it takes a television signal to reach a viewer in producing real-time entertainment such as games of skill synchronized with television programming. The latency issues are: 1) systemic propagation delays in the delivery of a television signal to a receiver, 2) arbitrarily imposed delays of a broadcast television signal and 3) variances in precise broadcast times of segments of taped television programs between local and national commercials, sold through syndication to individual television stations.

Systemic Propagation Delays

There are specific challenges facing a service comprised of games or other entertainment played by remote participants utilizing cellular phones or the Internet, in connection with a live or taped telecast. Examples are live baseball, basketball and football games, taped game shows such as Wheel of Fortune™ and Jeopardy™ or other television programming such as predicting the winners of the Oscars. In a game of skill, for example, fair competition necessitates that a fast paced game, based on the unfolding television action has a level playing field for all participants regardless of how they receive their television signal. Propagation delays result from, among other things, the number of satellite hops required to deliver the signal, the method of processing and rebroadcasting the signal after it is received by cable systems head ends or an over the air broadcast television station, and whether or not the signal is further processed for high definition television. Furthermore, digital television recording systems (DVRs) such as TiVo™ are also able to generate delays in the viewing of the picture after receipt via satellite or cable. These delays are able to result in a difference between the first signal received and the last received of more than several seconds.

People have an unsatisfactory experience and/or others are able to gain a potential competitive advantage from the variances in the exact time one viewer sees an event on their television versus another competitor who receives their television signal through a different delivery path. In the U.S., the 120 million television homes receive their signal either through an over the air broadcast, cable system or via satellite delivery. Each delivery system can impose propagation delays of various time lengths. If the delay between the time a viewer with the least amount of delay and the person receiving the signal with the greatest amount of delay exceeds several seconds, some inequalities in game experience and play are able to result.

One example is a game is based upon a football telecast, wherein competitors predict the play that the coaches and/or quarterback call prior to the snap of the ball. The competitor's prediction is based among other things on their observation of the down, distance and the offensive and defensive formations on the field and tendencies of the teams in these situations. Such a game utilizes a "lock out" signal, as described in the U.S. Pat. No. 4,592,546 to Fascenda, entitled "Game of Skill Playable by Remote Participants in Conjunction with a Live Event," which is incorporated by reference herein, to prohibit the entry of predictions after the competitor sees the play begin to unfold, at the snap of the ball. The time stamped "lock out" signal is generated by a game producer also viewing the same telecast from a different location. If the game producer is viewing a television signal several seconds before some competitors and generating a time stamp based on that event, an advantage is able to result if the difference in the time stamp and the receipt of the "lock out" signal is more than several seconds earlier in relation to another competitor's television signal which is delayed. During this period of time, for example, on a first or second down situation, a competitor receives the "lock out" just as the quarterback receives the snap and the corresponding television signal at the same time as the game producer while another competitor with a delayed television signal, receives a "lock out" signal while the quarterback is approaching the line of scrimmage. In another example, if the game producer is viewing a signal after a viewer, a competitor might see the quarterback start to drop back into a "shot gun" formation, making the likelihood of a pass considerably higher. This latter player might have time to change his prediction from, "run" to "pass" before receiving a "lock out" generated at the snap of the ball. A person consistently receiving a "lock out" later than another competitor might, through the course of the game, gain some competitive advantage.

While it is not clear that sufficient enough competitive advantage is gained between a competitor receiving his "lock out" signal precisely at the snap of the ball and one

who is locked out a few seconds prior to the snap of the ball, this discrepancy could present the appearance of a playing field that is not level, and one of the primary benefits of the system addressed in the present invention is to ensure the competitors feel they are on equal footing.

The present invention solves the above described issue through a system and method to effectively equalize systemic propagation delay variances to a required level dictated by the demands and rules of a particular game, so that a material competitive advantage is not obtained and the user experience is optimized for all players.

The solution first relies on the determination of how each viewer is receiving their television signal (e.g. via an over the air broadcast in a metropolitan area, via a particular cable system or a particular satellite system). All subscribers to a particular service provider or who are receiving an over the air broadcast in a specific metropolitan area will receive the signal at their location at the same time. It is also able to be determined if there is further processing of the signal within the homes, office, bar and others, which could further increase the total length of the propagation delay. Examples would be the use of a DVR, such as TiVo™. The present invention relies on a variety of methodologies which are able to be utilized to determine the time difference between the reception of the television picture being utilized by the central game production facility where "lock out" signals are generated and each separate group of viewers around the country or around the world.

For this system, the total viewing population for a telecast is divided into segments or blocks of viewers referred to as "cohorts." For example, the 2 million inhabitants of the San Francisco Bay Area would be divided into approximately 1 over the air broadcast, 3 satellite independent providers and several cable "head ends" or central broadcast points serving a "cohort." This information would be gathered at a central game server, and all players registered to play in a particular contest would be assigned to a specific cohort of viewers.

The following are some methodologies for determining the delays experienced by various cohorts which are able to be used in combination or separately.

In one methodology, upon joining the service and prior to initial game play, subscribers and competitors are required to identify the method by which they receive their television signal and identify the cable or satellite service provider and answer questions relative to whether or not they subscribe to an analog or digital high definition service or utilize a DVR. This information is able to be verified by sending questions to their cellular phones concerning commercials, station breaks and the precise time they are viewed or utilizing other information only seen by members of that cohort.

In another methodology, a routine is established upon entry into the game where the individual viewer is asked to mark the precise time a predetermined audio or visual event in the television program occurs, such as the initial kickoff, which would establish the deviation of their receipt of their television picture from the television signal utilized by the game producers. While some viewers might attempt to cheat by delaying their input, the earliest entries from the cohorts in this group would be averaged to establish the accurate delta between the receipt of the telecast by the production crew and those in each discrete sub group of viewers.

In another methodology, the GPS function in the cellular phone is used to determine the physical location of a viewer which is matched to a database of cable lead ends or over the air broadcast stations available to a consumer in that precise location.

In another methodology, employees of the game producer who are members of the subgroups which constitute the competitors/viewers, e.g. a subscriber to Comcast Cable in San Francisco, are utilized by the game service provider. These individuals would provide the current propagation delay information sent to the game server utilizing their identification of a recognizable event they observe on their television set, such as the initial snap of the ball.

In another methodology, audio or video artifacts or information done in cooperation with the television signal provider are inserted which must be immediately responded to by the competitor to verify the source of their television signal or monitored at cooperative viewers' television sets.

In another methodology, the various delays through an automated system linked to the game server, which continuously samples the audio or video track of the underlying satellite, cable or over the air broadcast television signals are established around the country to provide the information of the precise arrival of the underlying television picture.

Utilizing software resident in the game control server, game control data for each set of viewers/competitors of the game in progress who are receiving their television picture through the same source are batched together by the game control server, and the appropriate delay is either time stamped on the game "lock out" signals, or is imposed on the entire data stream so that competitors receiving their television information slightly behind or ahead of others gain no material competitive advantage. Another method is for the game control server to send all the game control data to all of the viewers/competitors of the game at the same time, and the client software is able to delay the presentation of the game data based on the viewers' cohort.

Utilizing these methodologies to measure the delays in each cohort, each cohort of viewers would have artificial time delays on the game control information imposed by the game control server, which would substantially equalize the receipt of "lock out" data relative to the event triggering the "lock out," based on the underlying television programming, for example, the snap of the football. Players receiving the television signals in advance of the one with the slowest receipt of the television signal would receive "lock out" signals slightly delayed or time stamped with a slightly later time as described in U.S. Pat. No. 4,592,546. By providing a correspondingly delayed lock out to a viewer receiving their signal later, a potential advantage is mitigated.

Alternatively, this time equalization from cohort to cohort could, for example, involve artificially delaying the transmission of the game control data stream sent to all competitors cell phones or other mobile devices by the appropriate amount of seconds, to sufficiently minimize the advantage a player with a few more seconds of television based information would have. For example, by time stamping the "lock out" signal at an earlier event, such as when the team breaks from the huddle, the chance of some cohorts seeing the actual beginning of the play is eliminated and the discrepancy in propagation delay provides little or no advantage.

FIG. **1** illustrates a flowchart of a process of preventing latency issues from giving an advantage to some participants. In the step **100**, it is determined how each viewer receives a television signal, where possibilities include an over the air broadcast, a particular cable system or a particular satellite system. In the step **102**, it is determined if there is additional processing of the television signal when after the signal enters a viewer/participant's house, office, bar or other location from an item such as a DVR. In the step **104**, the viewers/participants are grouped into groups also

referred to as cohorts. In the step **106**, a delay amount is determined for each group. The delay amount is able to be determined by the one or more methods as described above. In the step **108**, the viewers/participants are equalized. The methods of equalization vary, but some examples include time stamping on the game "lock out" signals, imposing a time stamp on the entire data stream so that competitors receiving their television information is slightly behind or ahead of others gain no material competitive advantage. Another method is for the game control server to send all the game control data to all of the viewers/participants of the game at the same time, and the client software is able to delay the presentation of the game data based on the viewers' group.

Arbitrarily Imposed Delays on the Broadcast of the Signal and the Physically Present Competitor

As a result of the Janet Jackson half time show episode at the 2004 Super Bowl, some networks have announced their intentions to impose up to a 7 second delay on telecasts of live sporting events. More recently an obscenity uttered by a competitor at the conclusion of a live NASCAR race has resulted in another network announcing it may impose a 5-7 second delay on future broadcasts of NASCAR races. These arbitrarily imposed delays are a significantly longer duration than those resulting from the above described propagation delays of the broadcast television or cellular network control information.

A distinct advantage is able to arise for a game player who is physically present at an event being televised which is the basis of a contest of skill in the home, or other location, separate from the live game venue. This is because in certain instances they will receive "lock out" signals generated for competitors among the television viewing audience, particularly if the game producer is not physically present at the venue, but producing by viewing a telecast. This discrepancy would permit prediction entry as much as 7 seconds later than those watching an artificially delayed television picture. This magnitude of delay can result in a significant competitive advantage for the game player who is physically present. For example, a soccer or hockey contest of skill might contain an element where a competitor is given a limited number of opportunities to predict if there will be a "shot on goal" within the next 5 seconds. The 5 second advantage to the competitor physically present would be significant, because the receipt of a lockout signal generated for the huge television audience could occur after a shot had occurred.

In a contest based on a football game, a competitor present at the stadium would receive their "lock out" signals after the play was underway and could often determine whether the play was a pass or a run prior to receipt of the lockout signal. It is also likely that other live televised events such as The Oscars, Grammy's, beauty contests and other television programming that can support games of skill would impose delays on the telecast for the same or different reasons, also providing the opportunity for a competitive advantage for those who are attending the event in person.

The cellular telephone system currently has methodologies to determine a user's physical location. The 911 emergency laws mandate the cellular systems to have the capability of determining the location of a 911 emergency caller within 150 feet. More sophisticated approaches combine cellular site location technology with geosynchronous positioning satellite capabilities. Companies like Qualcomm™ have implemented various location technologies such as Snaptrack, Snap Smart and Snapcore, which provide a cellular phone's physical location within a matter of yards.

For each televised live event, the physical venue for this event would be known by the organizer of a game of skill in advance. Therefore, it is possible to determine for each contest of skill the specific cellular sites which will serve cellular phone owners physically present at that venue. A methodology is employed to identify all of the cellular phones logging into the game server registering to play the game of skill which are co-located within cellular sites servicing the stadium or auditorium where the televised live event is taking place. The present invention is also able to involve a communication methodology between the cellular carrier and the game control computer software contained in the game application resident on a game competitor's phone, which would identify the cellular phone physically in the stadium.

Before the start of the contest of skill, the system informs the central computer of the game selected to be played by each competitor, for example, the San Francisco 49ers versus the New York Giants. The central game control server's software would hold current information on the physical location of the stadium of each game, for example, Candlestick Park in South San Francisco, and the cellular sites covering this location. The software resident on the cellular phone or on the server then identifies the phone as one located physically at the telecast game's venue.

To ensure that potential competitors at the live venue are able to also compete in a contest of skill, the central game server will separate the scoring data and game control data for competitors using these cellular phones in this specific location from the general pool of competitors who are not so located, but watching the game via television. A separate contest is then generated and scored for those competitors who have the advantage of viewing the event live, and a separate prize pool is awarded. This separate game would be produced though the observation of the actual game physically at the venue or through the operation of a non-delayed satellite feed.

If it is ultimately determined that certain groups of television viewers, as opposed to live event attendees, who are competitors in these games of skill are gaining sufficient enough competitive advantage, segregating those players at the extreme ends of the propagation delays, into two or more separate contests with separate sets of prizes, may also be employed as described above. For example, separate contests for satellite viewers versus cable and over the air viewers are able to be generated.

FIG. **2** illustrates a flowchart of a process of preventing participants at a live event from having an unfair advantage over participants watching on television. In the step **200**, a cellular site that serves cellular phones at a venue site is determined for each contest of skill. For example, if a game of skill is played for a game between the San Francisco 49ers and the Oakland Raiders at Candlestick Park in South San Francisco, a specific cellular site serves the cellular phones in that location. In the step **202**, the cellular phones that are utilizing the cellular site of the venue site and are participating in the game of skill for that event are determined. For example, if there are 1,000 cellular phone users in Candlestick Park who register to play in a game of skill involving the 49ers and the Raiders, they are detected by the system. In the step **204**, it is determined if the cellular phone is located within the venue site. The determination is made by comparing the current cellular information with information stored on a server indicating the location of each venue such as Candlestick Park. Based on the determination in the step **204**, separate groups are generated in the step **206**. A group is generated for users that are located at the live venue, and

a group is generated for those players that are watching live on television. Therefore, the live players who do not experience any delay compete against each other, and television viewers compete with others television viewers who have a delay.

In addition to implementing the above-mentioned solutions to latency issues, additional groups are able to be generated if the delays between signal providers are not resolved. For example, all viewers with satellite television signals compete against each other, and all cable television viewers compete against each other, with no cross competition.

Taped and Syndicated Television Programs

A separate but related latency problem arises in the case of syndicated television shows, which are by necessity pre-taped. Examples are game shows like Wheel of Fortune™ and Jeopardy™. These pre-recorded television game shows are generally syndicated, meaning they are sold to a specific television station on an exclusive lease for the local television market served by the station's signal. The television stations generally air these half hour episodes at various times in "prime time access," which is generally considered between 6-8 pm. Therefore, with 3 different time zones in the United States, the start times will differ from market to market. In addition, the precise time each commercial bracketed television show segment that is broadcast is able to vary by a few seconds based on the time each station's engineering personnel starts the show's segments after the insertion of local and national commercials. Thus, for a show like Jeopardy™, there might be over 100 separate slightly different broadcasts from a time standpoint for a single episode of Jeopardy™ on a given day. In addition, these syndicated telecasts can also experience the same propagation delays as described above.

Contests of skill on cellular phones around these syndicated telecasts are produced with the cooperation of the game show producers, and game data files are produced which are precisely time-synchronized to the final video tape of the television game show. These files must be precisely synchronized and a delay of just a few seconds could give an unfair competitive advantage to a viewer who is receiving their "lock out" signal later than another competitor in a fast paced game like Jeopardy™. The game data files must be synchronized with the television show at the beginning of the program and again as the show returns to the game competition from each commercial break.

This solution addresses the separate, but related problems of synchronizing game data files with the broadcast of prerecorded and syndicated games, entertainment, reality or other television programming that is aired in different time zones at the choice of the purchasing television station. As opposed to live sporting events, the game production for this genre of programming is not done live through real-time observation of the unfolding telecast but is produced in advance with the cooperation of the show producer as a time synchronized file utilizing the final edited for broadcast, television program.

In general, the game data files are divided into separate "segments" which comprise the entire television program and aired between the insertion of national, regional and local advertising. As the television program returns from the opening commercials, the initial game or entertainment segment is launched by the game producer, synchronized to the playing of the television tape, and the data files for this segment would end with the first commercial break. The other game "chapters" are resynchronized as each segment of the telecast resumes from commercial break. The local telecasts might have variations of anywhere from 1 to 5 seconds, or more, resulting from the use of different commercials by different stations, and the variances in the local production by the engineering management of the syndicated telecasts.

This invention protects a system which first determines all of the separate and unique television markets where the cellular phone service will be offered in connection with a syndicated, taped version of an underlying television program, for example, Jeopardy™. Network broadcasts usually air in three separate time zones. This information is available from the shows syndicator, for example, Jeopardy™, the syndicator King World™ or Sony™, the show's licensor. This information is also publicly available through the various television guides. The game production servers hold the pre-produced game data files to be broadcast to the cellular phones of the participating subscribers, containing, for example, the correct answers and possibly some intentionally wrong multiple choice answers in the case of Jeopardy™ or other multiple choice based game shows. The server begins the broadcast of its time synchronized files for each discrete telecast of a single television program at a precise start point for each "segment" or chapter. With knowledge of the precise timing of the discrete segments of the broadcast, for each separate syndicated market, the server transmits the pre-recorded files in most cases, at a slightly separate and different time to each viewer who is viewing the telecast in a particular market via a particular broadcast, satellite or cable signal.

The precise start times of the beginning episode of a game show and the start times of the other segments, beginning as the show resumes after a national and local commercial are delivered to the server through various methodologies.

One methodology requires the cooperation of an employee of the game provider based on visual observation of the telecast for that market, utilizing a personal computer and the Internet, or by utilizing their local cellular phone, all coupled to the game server.

Another methodology includes utilizing an audio or video recognition system with online access to the broadcast of the underlying television program for each separate market which provides real-time tracking of the television broadcast to the game control server, ensuring the game data file is able to be precisely synchronized to the television picture. Information is also able to be inserted in a Vertical Banking Interval (VBI) of the taped syndicated show and tracked online in real time by the game control server. For remote telecasts and online connection from a remote device, reading data embedded in the VBI via a high speed connection to the central game server is utilized. Utilizing some of the procedures outlined above, the propagation delays in the receipt of the cellular transmissions are also monitored and the game server adjusts the data files containing the "lock outs" to accommodate the systemic delay in the delivery of the game data on the cellular networks.

Another methodology, with the cooperation of the producers of game shows, precise audio or video events in the telecast could either be added to the video, such as a visible count down, or existing events in the telecast identified by the producers as synchronization points which the competitors could utilize as start points for the previously downloaded data files at the press of an appropriate button on their cellular phone. This would trigger the launch of a program previously downloaded to the phone's RAM. Then, time synchronization would be launched.

One more methodology uses an audio signal, possibly sub-audible to humans, which is inserted into the taped

audio track recognizable by the audio receiver in a cellular phone which would be utilized to start and/or continually keep the pre-produced data files resident on the cellular phone in synchronization with the telecast.

FIG. **3** illustrates a flowchart of a process of handling latency issues for taped programs. In the step **300**, pre-produced game data files are stored in servers; preferably, game production servers. The game data files include information required to participate in a game such as questions and answers for a trivia game like Jeopardy™. In the step **302**, start times are determined for each discrete telecast of a show. The start times are determined as described above, such as with the cooperation of a game provider employee, utilizing an audio/video recognition system, using a visible count down or a recognizable signal which is able to be recognized by a cellular phone. Other ways of determining start times are possible as well. In the step **304**, the game data files are transmitted at appropriate times based on the start times for each separate market. Furthermore, if additional delays are recognized, such as those delays described above, that is able to be accounted for.

FIG. **4** illustrates a graphical representation of an embodiment of the present invention. A server **400** contains applications **402** and a storage mechanism **404**. The applications **402** include an application to generate and modify game control data. The game control data is eventually transferred to users' cellular phones. If necessary the game control data is synchronized and time-stamped for each group, so that, as described previously, there are no unfair advantages for the competitors. A location application stored on the server **400** is able to determine which cellular phones are logged into the server **400** and what their location is. A grouping application is able to separate information such as scoring data and game control data into different groups. The grouping application also separates the cellular phones into groups or cohorts as described above. The storage mechanism **404** is utilized for storing the applications **402** in addition to selections and results. The storage mechanism **404** preferably includes a database for organizing the data including the selections, results, standings and groups amongst other data needed for executing the competitions. The server **400** is part of a network **406**. A device **408** couples to the server **400** through the network **406**. In some embodiments the network **406** includes the Internet. In some embodiments, the network **406** includes a cellular network. Also, in some embodiments, the network **406** includes both the Internet and a cellular network. The device **408** is preferably a cellular phone. In other embodiments a PDA, a computer, a laptop or any other device capable of communicating with the server **400** is possible. The device **408** stores a variety of applications **410**. A game application is stored on the device **408**. In some embodiments, software to identify the physical location of the device **408** is stored on the device **408**. The device **408** also receives the game control data which ensures no competitors have an unfair advantage using the methodologies described above. Furthermore, the device **408** receives game data which is used to play the games. An example of game data includes Jeopardy™ multiple choice answers. Additional applications are able to be included on the server **400** and on the device **408**, as necessary, for smooth operation of the games. Although some of the applications are described separately above, in some embodiments, the applications are included in one large application.

FIG. **5** illustrates a graphical representation of a network of devices of the present invention. A server **400** is coupled to many devices through a network **406**. The devices are grouped into groups or cohorts as described above. For example, Group 1 of devices **500** includes a set of devices that receive a television signal through cable with a delay time of x. Group 2 of devices **502** includes a set of devices that receive a television signal through satellite with a delay time of y. Group 3 of devices **504** includes a set of devices that receive a television signal over the air with a delay time of z. Then, based on the delay times of each group, steps need to be taken to ensure these delays do not affect the ability of users to play a game of skill which corresponds to a live event shown on television. As described above, a lockout signal is sent at the appropriate time depending on the delay, or a lockout signal is sent, but included with the lockout signal is information for the lockout not to be implemented until the delay is accounted for. This ensures that users with different delays based on their television signal reception path do not receive advantages or disadvantages. Furthermore, in addition to the delays being related to the type of signal reception path such as cable versus satellite, the delays could also be related to other aspects of the signal reception path such as the location of the receiving television or the type of equipment that one television company uses versus another.

To utilize the present invention, for the most part, a participant in a game of skill playing on his/her mobile device does not have to perform any different actions when playing a standard game of skill without the present invention. The user simply plays as usual except that with the present invention, users with faster or slower connections do not receive any advantages or disadvantages. In embodiments which require user input, the user performs an action, such as recognizing an event to synchronize the game with a live or taped event. For game producers, implementing the present invention is able to be automated or performed manually. Automation includes technology to automatically determine the start of an event such as automatically detecting the start of a football game. Manual implementation requires a person to watch an event and respond to that event such as watching a football game and noting when the first play occurs in order to synchronize the "lock out" signal appropriately.

In operation, the present invention is able to synchronize separate games of skill which have different latencies based on television signal reception differences, random delays and/or other delays. For live events where all of the participants are watching the event on television and participating in a game of skill corresponding to that live event, delays related to the television signal reception differences have to be handled. Television signal reception differences occur because some televisions receive the live event signal via satellite, while others have cable and still others have something else. The signals do not arrive at the participants at the same time. Therefore, to ensure fair competition, participants are separated into groups or cohorts based on delivery system type, location and other parameters that affect the timing of the signal. Then, using a mechanism described above, the delay for each group is determined. Based on that determined delay, the game of skill is able to be configured with the appropriate timing for a lock out signal, so that each participant has the same amount of time to select an answer and also sees the same amount of the live event as others before the lock out occurs.

For games of skill where there are both participants attending the event live and watching it on television which typically has a few seconds delay, the participants are separated into different competitive groups wherein the

attending participants are in one group and the television viewing participants are in another group.

For games of skill using tape recorded events like game shows, the important aspect is ensuring the game of skill corresponds with the televised recorded event. For example, if the game of skill were off by a few seconds, participants could receive multiple choice answers to the wrong questions. Therefore, the present invention ensures that the game of skill is synchronized with the taped televised event even when there are different latencies depending on how and where the television signal is being displayed.

Furthermore, although the methods of handling latency have been described above as handling a specific scenario such as delays in television signal reception, the methods are able to be used in conjunction with each other as well. For example, when participants are separated into attending and televised groups because some participants are actually attending an event while others watch it on television, for those watching it on television there will still be issues from location to location and based on the television signal reception, so the latency balancer which handles that aspect of latency is also able to be implemented.

The present invention has been described in terms of specific embodiments incorporating details to facilitate the understanding of principles of construction and operation of the invention. Such reference herein to specific embodiments and details thereof is not intended to limit the scope of the claims appended hereto. It will be readily apparent to one skilled in the art that other various modifications may be made in the embodiment chosen for illustration without departing from the spirit and scope of the invention as defined by the claims.

What is claimed is:

1. A method of providing a game of skill or chance or other entertainment including content related to an event, the method comprising:

a. determining a location of a mobile device;

b. providing the game of skill or chance or other entertainment during the event, based on the location of the mobile device;

c. receiving input related to the game of skill or chance or other entertainment during the event; and

d. triggering a lockout signal to prevent users from submitting a response to the game of skill or chance or other entertainment, including utilizing a person in physical attendance at the event to determine when to trigger the lockout signal.

2. The method of claim **1** wherein determining the location of the mobile device includes determining whether the mobile device is within a gaming or sporting event venue.

3. The method of claim **1** wherein the content comprises information or entertainment content.

4. The method of claim **1** wherein input to the mobile device is by a cellular, WiFi, Bluetooth or another 2-way wireless transmission.

5. The method of claim **1** wherein the content comprises betting data from a real-time sports betting service.

6. The method of claim **1** wherein the content relates to a real-time sports prediction contest.

7. The method of claim **1** wherein the content relates to selections of a subset of participants in the event.

8. The method of claim **1** wherein the lockout signal is triggered immediately before users are able to see a relevant gameplay unfold.

9. The method of claim **1** wherein the lockout signal is triggered during an in-progress play, not during a stoppage, and prevents submitting a response before a critical element of the in-progress play unfolds.

10. The method of claim **1** wherein providing the game of skill or chance or other entertainment includes sending the content related to the event via a wireless network.

11. The method of claim **10** wherein the wireless network comprises the Internet and/or a cellular network, including cellular, WiFi, Bluetooth or another 2-way wireless transmission.

12. The method of claim **1** wherein the lockout signal suspends interaction for a limited amount of time.

13. The method of claim **1** wherein global positioning system information is utilized to determine the location of the mobile device.

14. The method of claim **1** wherein the lockout signal occurs during an in-progress play, not during a stoppage, and prevents submitting the response before a critical element of the in-progress play unfolds.

15. The method of claim **14** wherein the lockout signal suspends the ability to submit the response while betting odds information is updated to reflect changing event status.

16. The method of claim **1** wherein the lockout signal is initiated before a scoring chance in the game of skill or chance or other entertainment and additional user input is allowed after the scoring chance is resolved.

17. The method of claim **16** wherein the lockout signal prevents a response while betting odds information is updated to reflect changing event status.

18. A device for providing a game of skill or chance or other entertainment including content related to an event, the device comprising:

a. a memory for storing an application, the application configured for:

i. determining a location of a mobile device;

ii. providing the game of skill or chance or other entertainment during the event, based on the location of the mobile device;

iii. receiving input related to the game of skill or chance or other entertainment during the event; and

iv. triggering a lockout signal to prevent users from submitting a response to the game of skill or chance or other entertainment, including utilizing a person in physical attendance at the event to determine when to trigger the lockout signal; and

b. a processor configured for processing the application.

19. The device of claim **18** wherein determining the location of the mobile device includes determining whether the mobile device is within a gaming or sporting event venue.

20. The device of claim **18** wherein input to the mobile device is by a cellular, WiFi, Bluetooth or another 2-way wireless transmission.

21. The device of claim **18** wherein the content comprises betting data from a real-time sports betting service.

22. The device of claim **18** wherein the content relates to a real-time sports prediction contest.

23. The device of claim **18** wherein the lockout signal is triggered immediately before users are able to see a relevant gameplay unfold.

24. The device of claim **18** wherein the lockout signal is triggered during an in-progress play, not during a stoppage, and prevents submitting a response before a critical element of the in-progress play unfolds.

25. The device of claim **18** wherein the lockout signal suspends interaction for a limited amount of time.

26. The device of claim **18** wherein global positioning system information is utilized to determine the location of the mobile device.

27. The device of claim **18** wherein the lockout signal occurs during an in-progress play, not during a stoppage, and prevents submitting the response before a critical element of the in-progress play unfolds.

28. The device of claim **27** wherein the lockout signal suspends the ability to submit the response while betting odds information is updated to reflect changing event status.

29. The device of claim **18** wherein the lockout signal is initiated before a scoring chance in the game of skill or chance or other entertainment and additional user input is allowed after the scoring chance is resolved.

30. The device of claim **29** wherein the lockout signal prevents a response while betting odds information is updated to reflect changing event status.

31. A server device for providing a game of skill or chance or other entertainment including content related to an event, the device comprising:

a. a memory for storing an application, the application configured for:

i. determining a location of a mobile device;

ii. providing the game of skill or chance or other entertainment during the event, based on the location of the mobile device; and

iii. receiving input related to the game of skill or chance or other entertainment during the event;

iv. triggering a lockout signal to prevent users from submitting a response to the game of skill or chance or other entertainment, including utilizing a person in physical attendance at the event to determine when to trigger the lockout signal; and

b. a processor configured for processing the application.

32. The server device of claim **31** wherein determining the location of the mobile device includes determining whether the mobile device is within a gaming or sporting event venue.

33. The server device of claim **31** wherein input to the mobile device is by a cellular, WiFi, Bluetooth or another 2-way wireless transmission.

34. The server device of claim **31** wherein the content comprises betting data from a real-time sports betting service.

35. The server device of claim **31** wherein the content relates to a real-time sports prediction contest.

36. The server device of claim **31** wherein triggering the lockout signal occurs immediately before users are able to see a relevant gameplay unfold.

37. The server device of claim **31** wherein triggering the lockout signal occurs during an in-progress play, not during a stoppage, and prevents submitting a response before a critical element of the in-progress play unfolds.

38. The server device of claim **31** wherein the lockout signal suspends interaction for a limited amount of time.

39. The server device of claim **31** wherein global positioning system information is utilized to determine the location of the mobile device.

40. The server device of claim **31** wherein the lockout signal occurs during an in-progress play, not during a stoppage, and prevents submitting the response before a critical element of the in-progress play unfolds.

41. The server device of claim **40** wherein the lockout signal suspends the ability to submit the response while betting odds information is updated to reflect changing event status.

42. The server device of claim **31** wherein the lockout signal is initiated before a scoring chance in the game of skill or chance or other entertainment and additional user input is allowed after the scoring chance is resolved.

43. The server device of claim **42** wherein the lockout signal prevents a response while betting odds information is updated to reflect changing event status.

* * * * *

Exhibit 6

US011736771B2

(12) United States Patent
Lockton et al.

(10) Patent No.: US 11,736,771 B2
(45) Date of Patent: *Aug. 22, 2023

(54) **METHODOLOGY FOR EQUALIZING SYSTEMIC LATENCIES IN TELEVISION RECEPTION IN CONNECTION WITH GAMES OF SKILL PLAYED IN CONNECTION WITH LIVE TELEVISION PROGRAMMING**

(71) Applicant: **Winview, Inc.**, Redwood City, CA (US)

(72) Inventors: **David B. Lockton**, Redwood City, CA (US); **Mark K. Berner**, Santa Clara, CA (US); **Mark J. Micheli**, San Francisco, CA (US); **David Lowe**, Foster City, CA (US)

(73) Assignee: **Winview, Inc.**, Redwood City, CA (US)

(*) Notice: Subject to any disclaimer, the term of this patent is extended or adjusted under 35 U.S.C. 154(b) by 2 days.

This patent is subject to a terminal disclaimer.

(21) Appl. No.: **17/387,055**

(22) Filed: **Jul. 28, 2021**

(65) **Prior Publication Data**

US 2021/0354034 A1 Nov. 18, 2021

Related U.S. Application Data

(60) Continuation of application No. 16/752,541, filed on Jan. 24, 2020, now Pat. No. 11,077,366, which is a (Continued)

(51) **Int. Cl.**
A63F 3/08 (2006.01)
H04N 21/478 (2011.01)
(Continued)

(52) **U.S. Cl.**
CPC ***H04N 21/4781*** (2013.01); ***A63F 13/216*** (2014.09); ***A63F 13/22*** (2014.09);
(Continued)

(58) **Field of Classification Search**
CPC A63F 13/358; A63F 13/32; A63F 13/285; A63F 13/50; A63F 13/92; A63F 13/335;
(Continued)

(56) **References Cited**

U.S. PATENT DOCUMENTS

2,831,105 A 4/1958 Parker
3,562,650 A 2/1971 Gossard et al.
(Continued)

FOREIGN PATENT DOCUMENTS

CA 2252074 11/1997
CA 2252021 11/1998
(Continued)

OTHER PUBLICATIONS

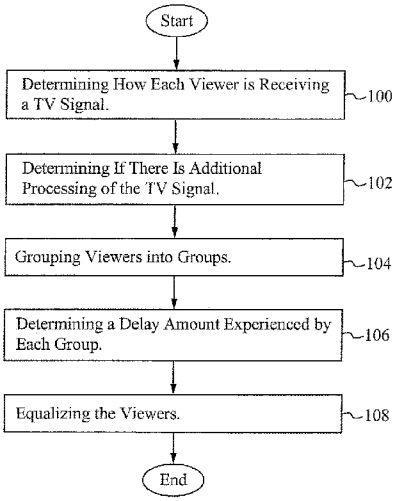
Fantasy sport-Wikipedia.pdf, https://en.wikepedia.org/w/index.php?title=Fantasy_sport&oldid=685260969(Year:2015).
(Continued)

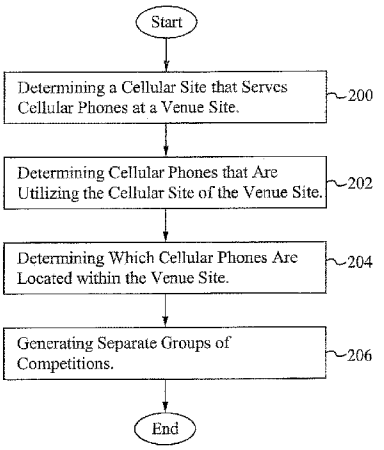
Primary Examiner — Masud Ahmed
(74) *Attorney, Agent, or Firm* — Haverstock & Owens, A Law Corporation

(57) **ABSTRACT**

A method of and system for handling latency issues encountered in producing real-time entertainment such as games of skill synchronized with live or taped televised events is described herein. There are multiple situations that are dealt with regarding latencies in receiving a television signal with respect to real-time entertainment based on the unfolding games played along with the telecasts. Systemic delays, arbitrarily imposed delays of a broadcast signal and variances in the precise broadcast times of taped television programs have to be equalized so as to provide fair entertainment.

44 Claims, 5 Drawing Sheets





Related U.S. Application Data

continuation of application No. 16/228,583, filed on Dec. 20, 2018, now Pat. No. 10,576,371, which is a continuation of application No. 15/963,970, filed on Apr. 26, 2018, now Pat. No. 10,195,526, which is a continuation of application No. 15/625,988, filed on Jun. 16, 2017, now Pat. No. 9,993,730, which is a continuation of application No. 14/922,937, filed on Oct. 26, 2015, now Pat. No. 9,861,125, which is a continuation of application No. 14/140,198, filed on Dec. 24, 2013, now Pat. No. 9,258,601, which is a continuation of application No. 13/681,242, filed on Nov. 19, 2012, now Pat. No. 8,638,517, which is a division of application No. 13/403,845, filed on Feb. 23, 2012, now Pat. No. 8,717,701, which is a continuation of application No. 11/786,992, filed on Apr. 12, 2007, now Pat. No. 8,149,530.

(60) Provisional application No. 60/791,793, filed on Apr. 12, 2006.

(51) **Int. Cl.**

A63F 13/358	(2014.01)
A63F 13/335	(2014.01)
A63F 13/332	(2014.01)
A63F 13/216	(2014.01)
A63F 13/795	(2014.01)
A63F 13/338	(2014.01)
H04N 21/472	(2011.01)
H04N 21/61	(2011.01)
H04N 5/04	(2006.01)
H04N 21/436	(2011.01)
H04N 21/27	(2011.01)
H04N 21/43	(2011.01)
H04N 21/435	(2011.01)
A63F 13/22	(2014.01)
A63F 13/92	(2014.01)
H04N 21/2385	(2011.01)
H04N 21/258	(2011.01)
H04N 21/442	(2011.01)
H04N 21/45	(2011.01)
A63F 13/32	(2014.01)
A63F 13/285	(2014.01)
A63F 13/50	(2014.01)
H04N 21/24	(2011.01)

(52) **U.S. Cl.**

CPC ***A63F 13/285*** (2014.09); ***A63F 13/32*** (2014.09); ***A63F 13/332*** (2014.09); ***A63F 13/335*** (2014.09); ***A63F 13/338*** (2014.09); ***A63F 13/358*** (2014.09); ***A63F 13/50*** (2014.09); ***A63F 13/795*** (2014.09); ***A63F 13/92*** (2014.09); ***H04N 5/04*** (2013.01); ***H04N 21/2385*** (2013.01); ***H04N 21/24*** (2013.01); ***H04N 21/25866*** (2013.01); ***H04N 21/27*** (2013.01); ***H04N 21/4302*** (2013.01); ***H04N 21/435*** (2013.01); ***H04N 21/43615*** (2013.01); ***H04N 21/44209*** (2013.01); ***H04N 21/4508*** (2013.01); ***H04N 21/47217*** (2013.01); ***H04N 21/6131*** (2013.01); *A63F 2300/406* (2013.01); *A63F 2300/407* (2013.01); *A63F 2300/409* (2013.01); *A63F 2300/534* (2013.01)

(58) **Field of Classification Search**

CPC A63F 13/332; A63F 13/216; A63F 13/795; A63F 13/338; A63F 13/22; A63F 2300/407; A63F 2300/406; A63F 2300/409; A63F 2300/534; A63F 13/12; H04N 21/24; H04N 21/2385; H04N 21/25866; H04N 21/44209; H04N 21/4508; H04N 21/435; H04N 21/4781; H04N 21/47217; H04N 21/6131; H04N 5/04; H04N 21/43615; H04N 21/27; H04N 21/4302

USPC 360/65, 51; 381/103; 370/260; 463/40–42

See application file for complete search history.

(56) **References Cited**

U.S. PATENT DOCUMENTS

4,141,548	A	2/1979	Everton
4,270,755	A	6/1981	Willhide et al.
4,386,377	A	5/1983	Hunter, Jr.
4,496,148	A	1/1985	Morstain et al.
4,521,803	A	6/1985	Glittinger
4,592,546	A	6/1986	Fascenda et al.
4,816,904	A	3/1989	McKenna et al.
4,918,603	A	4/1990	Hughes et al.
4,930,010	A	5/1990	MacDonald
5,013,038	A	5/1991	Luvenberg
5,018,736	A	5/1991	Pearson et al.
5,035,422	A	7/1991	Berman
5,073,931	A	12/1991	Audebert et al.
5,083,271	A	1/1992	Thatcher et al.
5,083,800	A	1/1992	Lockton
5,119,295	A	6/1992	Kapur
5,120,076	A	6/1992	Luxenberg et al.
5,213,337	A	5/1993	Sherman
5,227,874	A	7/1993	Von Kohom
5,256,863	A	10/1993	Ferguson
5,263,723	A	11/1993	Pearson et al.
5,283,734	A	2/1994	Von Kohom
5,327,485	A	7/1994	Leaden
5,343,236	A	8/1994	Koppe et al.
5,343,239	A	8/1994	Lappington et al.
5,417,424	A	5/1995	Snowden
5,462,275	A	10/1995	Lowe et al.
5,479,492	A	12/1995	Hofstee et al.
5,488,659	A	1/1996	Millani
5,519,433	A	5/1996	Lappington
5,530,483	A	6/1996	Cooper
5,553,120	A	9/1996	Katz
5,566,291	A	10/1996	Boulton et al.
5,585,975	A	12/1996	Bliss
5,586,257	A	12/1996	Perlman
5,589,765	A	12/1996	Ohmart et al.
5,594,938	A	1/1997	Engel
5,618,232	A	4/1997	Martin
5,628,684	A	5/1997	Jean-Etienne
5,636,920	A	6/1997	Shur et al.
5,638,113	A	6/1997	Lappington
5,643,088	A	7/1997	Vaughn et al.
5,663,757	A	9/1997	Morales
5,759,101	A	6/1998	Won Kohom
5,761,606	A	6/1998	Wolzien
5,762,552	A	6/1998	Voung et al.
5,764,275	A	6/1998	Lappington et al.
5,794,210	A	8/1998	Goldhaber et al.
5,805,230	A	9/1998	Staron
5,813,913	A	9/1998	Berner et al.
5,818,438	A	10/1998	Howe et al.
5,828,843	A	10/1998	Grimm
5,838,774	A	11/1998	Weiser, Jr.
5,838,909	A	11/1998	Roy
5,846,132	A	12/1998	Junkin
5,848,397	A	12/1998	Marsh et al.
5,860,862	A	1/1999	Junkin
5,894,556	A	4/1999	Grimm
5,916,024	A	6/1999	Von Kohom
5,870,683	A	9/1999	Wells et al.
5,970,143	A	10/1999	Schneier et al.
5,971,854	A	10/1999	Pearson et al.

(56) **References Cited**

U.S. PATENT DOCUMENTS

5,987,440 A 11/1999 O'Neil et al.
6,009,458 A * 12/1999 Hawkins et al. 709/203
6,015,344 A 1/2000 Kelly et al.
6,016,337 A 1/2000 Pykalisto
6,038,599 A 3/2000 Black
6,042,477 A 3/2000 Addink
6,064,449 A 5/2000 White
6,104,815 A 8/2000 Alcorn et al.
6,110,041 A 8/2000 Walker et al.
6,117,013 A 9/2000 Elba
6,126,543 A 10/2000 Friedman
6,128,660 A 10/2000 Grimm
6,135,881 A 10/2000 Abbott et al.
6,154,131 A 11/2000 Jones, II
6,174,237 B1 1/2001 Stephenson
6,182,084 B1 1/2001 Cockrell et al.
6,193,610 B1 2/2001 Junkin
6,222,642 B1 4/2001 Farrell et al.
6,233,736 B1 5/2001 Wolzien
6,251,017 B1 6/2001 Leason et al.
6,267,670 B1 7/2001 Walker
6,287,199 B1 9/2001 McKeown et al.
6,293,868 B1 9/2001 Bernard
6,312,336 B1 11/2001 Handelman et al.
6,343,320 B1 1/2002 Fairchild
6,345,297 B1 2/2002 Grimm
6,371,855 B1 4/2002 Gavriloff
6,373,462 B1 4/2002 Pan
6,411,969 B1 6/2002 Tam
6,416,414 B1 7/2002 Stadelmann
6,418,298 B1 7/2002 Sonnenfeld
6,425,828 B2 7/2002 Walker et al.
6,434,398 B1 8/2002 Inselberg
6,446,262 B1 9/2002 Malaure et al.
6,470,180 B1 10/2002 Kotzin et al.
6,475,090 B2 11/2002 Gregory
6,524,189 B1 2/2003 Rautila
6,527,641 B1 * 3/2003 Sinclair et al. 463/39
6,530,082 B1 3/2003 Del Sesto et al.
6,536,037 B1 3/2003 Guheen et al.
6,578,068 B1 6/2003 Bowma-Amuah
6,594,098 B1 7/2003 Sutardja
6,604,997 B2 7/2003 Saidakovsky et al.
6,610,953 B1 8/2003 Tao et al.
6,648,760 B1 11/2003 Nicastro
6,659,860 B1 12/2003 Yamamoto et al.
6,659,861 B1 12/2003 Faris
6,659,872 B1 12/2003 Kaufman et al.
6,690,661 B1 2/2004 Agarwal et al.
6,697,869 B1 2/2004 Mallart
6,718,350 B1 4/2004 Karbowski
6,752,396 B2 6/2004 Smith
6,758,754 B1 7/2004 Lavanchy et al.
6,758,755 B2 7/2004 Kelly et al.
6,760,595 B2 7/2004 Insellberg
6,763,377 B1 7/2004 Balknap et al.
6,766,524 B1 7/2004 Matheny et al.
6,774,926 B1 8/2004 Ellis et al.
6,785,561 B1 8/2004 Kim
6,801,380 B1 10/2004 Saturdja
6,806,889 B1 10/2004 Malaure et al.
6,807,675 B1 10/2004 Millard et al.
6,811,482 B2 11/2004 Letovsky
6,811,487 B2 11/2004 Sengoku
6,816,628 B1 11/2004 Sarachik et al.
6,817,947 B2 11/2004 Tanskanen
6,824,469 B2 11/2004 Allibhoy et al.
6,837,789 B2 1/2005 Garahi et al.
6,837,791 B1 1/2005 McNutt et al.
6,840,861 B2 1/2005 Jordan et al.
6,845,389 B1 1/2005 Sen
6,846,239 B2 1/2005 Washio
6,857,122 B1 2/2005 Takeda et al.
6,863,610 B2 3/2005 Vancraeynest
6,870,720 B2 3/2005 Iwata et al.
6,871,226 B1 3/2005 Ensley et al.
6,873,610 B1 3/2005 Noever
6,884,166 B2 4/2005 Leen et al.
6,884,172 B1 4/2005 Lloyd et al.
6,887,159 B2 5/2005 Leen et al.
6,888,929 B1 5/2005 Saylor
6,893,347 B1 5/2005 Zilliacus et al.
6,898,762 B2 5/2005 Ellis et al.
6,899,628 B2 5/2005 Leen et al.
6,903,681 B2 6/2005 Faris
6,908,389 B1 6/2005 Puskala
6,942,574 B1 9/2005 LeMay et al.
6,944,228 B1 9/2005 Dakss et al.
6,960,088 B1 11/2005 Long
6,978,053 B1 12/2005 Sarachik et al.
7,001,279 B1 2/2006 Barber et al.
7,029,394 B2 4/2006 Leen et al.
7,035,626 B1 4/2006 Luciano, Jr.
7,035,653 B2 4/2006 Simon et al.
7,058,592 B1 6/2006 Heckerman et al.
7,076,434 B1 7/2006 Newman et al.
7,085,552 B2 8/2006 Buckley
7,116,310 B1 10/2006 Evans et al.
7,117,517 B1 10/2006 Milazzo et al.
7,120,924 B1 10/2006 Katcher et al.
7,124,410 B2 10/2006 Berg
7,125,336 B2 10/2006 Anttila et al.
7,136,871 B2 11/2006 Ozer et al.
7,144,011 B2 12/2006 Asher et al.
7,169,050 B1 1/2007 Tyler
7,185,355 B1 2/2007 Ellis
7,187,658 B2 3/2007 Koyanagi
7,191,447 B1 3/2007 Ellis et al.
7,192,352 B2 3/2007 Walker et al.
7,194,758 B1 3/2007 Waki et al.
7,228,349 B2 6/2007 Barone, Jr. et al.
7,231,630 B2 6/2007 Acott et al.
7,233,922 B2 6/2007 Asher et al.
7,240,093 B1 7/2007 Danieli et al.
7,244,181 B2 * 7/2007 Wang et al. 463/42
7,249,367 B2 7/2007 Bove, Jr. et al.
7,254,605 B1 8/2007 Strum
7,260,782 B2 8/2007 Wallace et al.
RE39,818 E 9/2007 Slifer
7,283,830 B2 10/2007 Buckley
7,288,027 B2 10/2007 Overton
7,341,517 B2 3/2008 Asher et al.
7,343,617 B1 3/2008 Kartcher et al.
7,347,781 B2 3/2008 Schultz
7,351,149 B1 4/2008 Simon et al.
7,367,042 B1 4/2008 Dakss et al.
7,379,705 B1 5/2008 Rados et al.
7,389,144 B1 6/2008 Osorio
7,430,718 B2 9/2008 Gariepy-Viles
7,452,273 B2 11/2008 Amaitis et al.
7,460,037 B2 12/2008 Cattone et al.
7,461,067 B2 12/2008 Dewing et al.
7,502,610 B2 3/2009 Maher
7,510,474 B2 3/2009 Carter, Sr.
7,517,282 B1 4/2009 Pryor
7,534,169 B2 5/2009 Amaitis et al.
7,543,052 B1 6/2009 Cesa Klein
7,562,134 B1 7/2009 Fingerhut et al.
7,602,808 B2 10/2009 Ullmann
7,610,330 B1 10/2009 Quinn
7,614,944 B1 11/2009 Hughes et al.
7,630,986 B1 12/2009 Herz et al.
7,693,781 B2 4/2010 Asher et al.
7,699,707 B2 4/2010 Bahou
7,702,723 B2 4/2010 Dyl
7,711,628 B2 5/2010 Davie et al.
7,729,286 B2 6/2010 Mishra
7,753,772 B1 7/2010 Walker
7,753,789 B2 7/2010 Walker et al.
7,780,528 B2 8/2010 Hirayama
7,828,661 B1 11/2010 Fish
7,835,961 B2 11/2010 Davie et al.
7,860,993 B2 12/2010 Chintala
7,886,003 B2 2/2011 Newman

(56) **References Cited**

U.S. PATENT DOCUMENTS

7,907,211 B2 3/2011 Oostveen et al.
7,907,598 B2 3/2011 Anisimov
7,909,332 B2 3/2011 Root
7,925,756 B1 4/2011 Riddle
7,926,810 B2 4/2011 Fisher et al.
7,937,318 B2 5/2011 Davie et al.
7,941,482 B2 5/2011 Bates
7,941,804 B1 5/2011 Herington
7,976,389 B2 7/2011 Cannon et al.
8,002,618 B1 8/2011 Lockton et al.
8,006,314 B2 8/2011 Wold
8,025,565 B2 9/2011 Leen et al.
8,028,315 B1 9/2011 Barber
8,082,150 B2 12/2011 Wold
8,086,445 B2 12/2011 Wold et al.
8,086,510 B2 12/2011 Amaitis et al.
8,092,303 B2 1/2012 Amaitis et al.
8,092,306 B2 1/2012 Root
8,105,141 B2 1/2012 Leen et al.
8,107,674 B2 1/2012 Davis et al.
8,109,827 B2 2/2012 Cahill et al.
8,128,474 B2 3/2012 Amaitis et al.
8,147,313 B2 4/2012 Amaitis et al.
8,147,373 B2 4/2012 Amaitis et al.
8,149,530 B1 4/2012 Lockton et al.
8,155,637 B2 4/2012 Fujisawa
8,162,759 B2 4/2012 Yamaguchi
8,176,518 B1 5/2012 Junkin et al.
8,186,682 B2 5/2012 Amaitis et al.
8,204,808 B2 6/2012 Amaitis et al.
8,219,617 B2 7/2012 Ashida
8,240,669 B2 8/2012 Asher et al.
8,246,048 B2 8/2012 Amaitis et al.
8,267,403 B2 9/2012 Fisher et al.
8,342,924 B2 1/2013 Leen et al.
8,342,942 B2 1/2013 Amaitis et al.
8,353,763 B2 1/2013 Amaitis et al.
8,376,855 B2 2/2013 Lockton et al.
8,396,001 B2 3/2013 Jung
8,397,257 B1 3/2013 Barber
8,465,021 B2 6/2013 Asher et al.
8,473,393 B2 6/2013 Davie et al.
8,474,819 B2 7/2013 Asher et al.
8,535,138 B2 9/2013 Amaitis et al.
8,538,563 B1 9/2013 Barber
8,543,487 B2 9/2013 Asher et al.
8,555,313 B2 10/2013 Newman
8,556,691 B2 10/2013 Leen et al.
8,585,490 B2 11/2013 Amaitis et al.
8,622,798 B2 1/2014 Lockton et al.
8,632,392 B2 1/2014 Shore et al.
8,634,943 B2 1/2014 Root
8,638,517 B2 1/2014 Lockton et al.
8,641,511 B2 2/2014 Ginsberg et al.
8,659,848 B2 2/2014 Lockton et al.
8,672,751 B2 3/2014 Leen et al.
8,699,168 B2 4/2014 Lockton et al.
8,705,195 B2 4/2014 Lockton
8,708,789 B2 4/2014 Asher et al.
8,717,701 B2 5/2014 Lockton et al.
8,727,352 B2 5/2014 Amaitis et al.
8,734,227 B2 5/2014 Leen et al.
8,737,004 B2 5/2014 Lockton et al.
8,738,694 B2 5/2014 Huske et al.
8,771,058 B2 7/2014 Alderucci et al.
8,780,482 B2 7/2014 Lockton et al.
8,805,732 B2 8/2014 Davie et al.
8,813,112 B1 8/2014 Cibula et al.
8,814,664 B2 8/2014 Amaitis et al.
8,817,408 B2 8/2014 Lockton et al.
8,837,072 B2 9/2014 Lockton et al.
8,849,225 B1 9/2014 Choti
8,849,255 B2 9/2014 Choti
8,858,313 B1 10/2014 Selfors
8,870,639 B2 10/2014 Lockton et al.
8,935,715 B2 1/2015 Cibula et al.
9,056,251 B2 6/2015 Lockton
9,067,143 B2 6/2015 Lockton et al.
9,069,651 B2 6/2015 Barber
9,076,303 B1 7/2015 Park
9,098,883 B2 8/2015 Asher et al.
9,111,417 B2 8/2015 Leen et al.
9,205,339 B2 12/2015 Cibula et al.
9,233,293 B2 1/2016 Lockton
9,258,601 B2 2/2016 Lockton et al.
9,270,789 B2 2/2016 Huske et al.
9,289,692 B2 3/2016 Barber
9,306,952 B2 4/2016 Burman et al.
9,314,686 B2 4/2016 Lockton
9,314,701 B2 4/2016 Lockton et al.
9,355,518 B2 5/2016 Amaitis et al.
9,406,189 B2 8/2016 Scott et al.
9,430,901 B2 8/2016 Amaitis et al.
9,457,272 B2 10/2016 Lockton et al.
9,498,724 B2 11/2016 Lockton et al.
9,501,904 B2 11/2016 Lockton
9,504,922 B2 11/2016 Lockton et al.
9,511,287 B2 12/2016 Lockton et al.
9,526,991 B2 12/2016 Lockton et al.
9,536,396 B2 1/2017 Amaitis et al.
9,556,991 B2 1/2017 Furuya
9,604,140 B2 3/2017 Lockton et al.
9,652,937 B2 5/2017 Lockton
9,662,576 B2 5/2017 Lockton et al.
9,662,577 B2 5/2017 Lockton et al.
9,672,692 B2 6/2017 Lockton
9,687,738 B2 6/2017 Lockton et al.
9,687,739 B2 6/2017 Lockton et al.
9,707,482 B2 7/2017 Lockton et al.
9,716,918 B1 7/2017 Lockton et al.
9,724,603 B2 8/2017 Lockton et al.
9,744,453 B2 8/2017 Lockton et al.
9,805,549 B2 10/2017 Asher et al.
9,821,233 B2 11/2017 Lockton et al.
9,878,243 B2 1/2018 Lockton et al.
9,881,337 B2 1/2018 Jaycob et al.
9,901,820 B2 2/2018 Lockton et al.
9,908,053 B2 3/2018 Lockton et al.
9,919,210 B2 3/2018 Lockton
9,919,211 B2 3/2018 Lockton et al.
9,919,221 B2 3/2018 Lockton et al.
9,978,217 B2 5/2018 Lockton
9,993,730 B2 6/2018 Lockton et al.
9,999,834 B2 6/2018 Lockton et al.
10,052,557 B2 8/2018 Lockton et al.
10,089,815 B2 10/2018 Asher et al.
10,096,210 B2 10/2018 Amaitis et al.
10,137,369 B2 11/2018 Lockton et al.
10,150,031 B2 12/2018 Lockton et al.
10,165,339 B2 12/2018 Huske et al.
10,186,116 B2 1/2019 Lockton
10,195,526 B2 2/2019 Lockton et al.
10,226,698 B1 3/2019 Lockton et al.
10,226,705 B2 3/2019 Lockton et al.
10,232,270 B2 3/2019 Lockton et al.
10,248,290 B2 4/2019 Galfond
10,279,253 B2 5/2019 Lockton
10,360,767 B2 7/2019 Russell et al.
10,569,175 B2 2/2020 Kosai et al.
10,653,955 B2 5/2020 Lockton
10,695,672 B2 6/2020 Lockton et al.
10,709,987 B2 7/2020 Lockton et al.
10,721,543 B2 7/2020 Huske et al.
10,981,070 B2 4/2021 Isgreen
2001/0004609 A1 6/2001 Walker et al.
2001/0005670 A1 6/2001 Lahtinen
2001/0013067 A1 8/2001 Koyanagi
2001/0013125 A1 8/2001 Kitsukawa et al.
2001/0020298 A1 9/2001 Rector, Jr. et al.
2001/0032333 A1 10/2001 Flickinger
2001/0036272 A1 11/2001 Hirayama
2001/0036853 A1 11/2001 Thomas
2001/0044339 A1 11/2001 Cordero
2001/0054019 A1 12/2001 de Fabrega

(56) **References Cited**

U.S. PATENT DOCUMENTS

2002/0010789 A1 1/2002 Lord
2002/0018477 A1 2/2002 Katz
2002/0026321 A1 2/2002 Faris
2002/0029381 A1 3/2002 Inselberg
2002/0035609 A1 3/2002 Lessard
2002/0037766 A1 3/2002 Muniz
2002/0069265 A1 3/2002 Bountour
2002/0042293 A1 4/2002 Ubale et al.
2002/0046099 A1 4/2002 Frengut et al.
2002/0054088 A1 5/2002 Tanskanen et al.
2002/0055385 A1* 5/2002 Otsu 463/42
2002/0056089 A1 5/2002 Houston
2002/0059094 A1 5/2002 Hosea et al.
2002/0059623 A1 5/2002 Rodriguez et al.
2002/0069076 A1 6/2002 Faris
2002/0076084 A1 6/2002 Tian
2002/0078176 A1 6/2002 Nomura et al.
2002/0083461 A1 6/2002 Hutcheson
2002/0091833 A1 7/2002 Grimm
2002/0094869 A1 7/2002 Harkham
2002/0095333 A1 7/2002 Jokinen et al.
2002/0097983 A1 7/2002 Wallace et al.
2002/0099709 A1 7/2002 Wallace
2002/0100063 A1 7/2002 Herigstad et al.
2002/0103696 A1 8/2002 Huang et al.
2002/0105535 A1 8/2002 Wallace et al.
2002/0107073 A1 8/2002 Binney
2002/0108112 A1 8/2002 Wallace et al.
2002/0108125 A1 8/2002 Joao
2002/0108127 A1 8/2002 Lew et al.
2002/0112249 A1 8/2002 Hendricks et al.
2002/0115488 A1 8/2002 Berry et al.
2002/0119821 A1 8/2002 Sen
2002/0120930 A1 8/2002 Yona
2002/0124247 A1 9/2002 Houghton
2002/0132614 A1 9/2002 Vanlujit et al.
2002/0133817 A1 9/2002 Markel
2002/0133827 A1 9/2002 Newman et al.
2002/0142843 A1 10/2002 Roelofs
2002/0144273 A1 10/2002 Reto
2002/0147049 A1 10/2002 Carter, Sr.
2002/0157002 A1 10/2002 Messerges et al.
2002/0157005 A1 10/2002 Bunk
2002/0159576 A1 10/2002 Adams
2002/0162031 A1 10/2002 Levin et al.
2002/0162117 A1 10/2002 Pearson
2002/0165020 A1 11/2002 Koyama
2002/0165025 A1 11/2002 Kawahara
2002/0177483 A1 11/2002 Cannon
2002/0184624 A1 12/2002 Spencer
2002/0187825 A1 12/2002 Tracy
2002/0198050 A1 12/2002 Patchen
2003/0002638 A1 1/2003 Kaars
2003/0003997 A1 1/2003 Vuong et al.
2003/0013528 A1 1/2003 Allibhoy et al.
2003/0023547 A1 1/2003 France
2003/0040363 A1 2/2003 Sandberg
2003/0054885 A1 3/2003 Pinto et al.
2003/0060247 A1 3/2003 Goldberg et al.
2003/0066089 A1 4/2003 Anderson
2003/0069828 A1 4/2003 Blazey et al.
2003/0070174 A1 4/2003 Solomon
2003/0078924 A1 4/2003 Liechty et al.
2003/0086691 A1 5/2003 Yu
2003/0087652 A1 5/2003 Simon et al.
2003/0088648 A1 5/2003 Bellaton
2003/0114224 A1 6/2003 Anttila et al.
2003/0115152 A1 6/2003 Flaherty
2003/0125109 A1 7/2003 Green
2003/0134678 A1 7/2003 Tanaka
2003/0144017 A1 7/2003 Inselberg
2003/0154242 A1 8/2003 Hayes et al.
2003/0165241 A1 9/2003 Fransdonk
2003/0177167 A1* 9/2003 Lafage et al. 709/200
2003/0177504 A1 9/2003 Paulo et al.
2003/0189668 A1 10/2003 Newman et al.
2003/0195023 A1 10/2003 Di Cesare
2003/0195807 A1 10/2003 Maggio
2003/0208579 A1 11/2003 Brady et al.
2003/0211856 A1 11/2003 Zilliacus
2003/0212691 A1 11/2003 Kuntala et al.
2003/0216185 A1 11/2003 Varley
2003/0216857 A1 11/2003 Feldman et al.
2003/0228866 A1 12/2003 Pezeshki
2003/0233425 A1 12/2003 Lyons et al.
2004/0005919 A1 1/2004 Walker et al.
2004/0014524 A1 1/2004 Pearlman
2004/0015442 A1 1/2004 Hmlinen
2004/0022366 A1 2/2004 Ferguson et al.
2004/0025190 A1 2/2004 McCalla
2004/0056897 A1 3/2004 Ueda
2004/0060063 A1 3/2004 Russ et al.
2004/0073915 A1 4/2004 Dureau
2004/0088729 A1 5/2004 Petrovic et al.
2004/0093302 A1 5/2004 Baker et al.
2004/0152454 A1 5/2004 Kauppinen
2004/0107138 A1 6/2004 Maggio
2004/0117831 A1 6/2004 Ellis et al.
2004/0117839 A1 6/2004 Watson et al.
2004/0128319 A1 7/2004 Davis et al.
2004/0139158 A1 7/2004 Datta
2004/0139482 A1 7/2004 Hale
2004/0148638 A1 7/2004 Weisman et al.
2004/0152517 A1 8/2004 Haedisty
2004/0152519 A1 8/2004 Wang
2004/0158855 A1 8/2004 Gu et al.
2004/0162124 A1 8/2004 Barton et al.
2004/0166873 A1 8/2004 Simic
2004/0176162 A1 9/2004 Rothschild
2004/0178923 A1 9/2004 Kuang
2004/0183824 A1 9/2004 Benson
2004/0185881 A1 9/2004 Lee
2004/0190779 A1 9/2004 Sarachik et al.
2004/0198495 A1 10/2004 Cisneros et al.
2004/0201626 A1 10/2004 Lavoie
2004/0203667 A1 10/2004 Shroder
2004/0203898 A1 10/2004 Bodin et al.
2004/0210507 A1 10/2004 Asher et al.
2004/0215756 A1 10/2004 VanAntwerp
2004/0216161 A1 10/2004 Barone, Jr. et al.
2004/0216171 A1 10/2004 Barone, Jr. et al.
2004/0224750 A1 11/2004 Ai-Ziyoud
2004/0242321 A1 12/2004 Overton
2004/0266513 A1 12/2004 Odom
2005/0005303 A1 1/2005 Barone, Jr. et al.
2005/0021942 A1 1/2005 Diehl et al.
2005/0026699 A1 2/2005 Kinzer et al.
2005/0028208 A1 2/2005 Ellis
2005/0043094 A1 2/2005 Nguyen et al.
2005/0060219 A1 3/2005 Deitering et al.
2005/0076371 A1 4/2005 Nakamura
2005/0077997 A1 4/2005 Landram
2005/0097599 A1 5/2005 Potnick et al.
2005/0101309 A1 5/2005 Croome
2005/0113164 A1 5/2005 Buecheler et al.
2005/0003878 A1 6/2005 Updike
2005/0131984 A1 6/2005 Hofmann et al.
2005/0138668 A1 6/2005 Gray et al.
2005/0144102 A1 6/2005 Johnson
2005/0155083 A1 7/2005 Oh
2005/0177861 A1 8/2005 Ma et al.
2005/0210526 A1 9/2005 Levy et al.
2005/0216838 A1 9/2005 Graham
2005/0235043 A1 10/2005 Teodosiu et al.
2005/0239551 A1 10/2005 Griswold
2005/0255901 A1 11/2005 Kreutzer
2005/0256895 A1 11/2005 Dussault
2005/0266869 A1 12/2005 Jung
2005/0267969 A1 12/2005 Poikselka et al.
2005/0273804 A1 12/2005 Preisman
2005/0283800 A1 12/2005 Ellis et al.
2005/0288080 A1 12/2005 Lockton et al.
2005/0288101 A1 12/2005 Lockton et al.
2005/0288812 A1 12/2005 Cheng

(56) **References Cited**

U.S. PATENT DOCUMENTS

2006/0020700 A1 1/2006 Qiu
2006/0025070 A1 2/2006 Kim et al.
2006/0046810 A1 3/2006 Tabata
2006/0047772 A1 3/2006 Crutcher
2006/0053390 A1 3/2006 Gariepy-Viles
2006/0058103 A1 3/2006 Danieli
2006/0059161 A1 3/2006 Millett et al.
2006/0063590 A1 3/2006 Abassi et al.
2006/0082068 A1 4/2006 Patchen
2006/0087585 A1 4/2006 Seo
2006/0089199 A1 4/2006 Jordan et al.
2006/0094409 A1 5/2006 Inselberg
2006/0101492 A1 5/2006 Lowcock
2006/0111168 A1 5/2006 Nguyen
2006/0135253 A1 6/2006 George et al.
2006/0148569 A1 7/2006 Beck
2006/0156371 A1 7/2006 Maetz et al.
2006/0160597 A1 7/2006 Wright
2006/0174307 A1 8/2006 Hwang et al.
2006/0183547 A1 8/2006 McMonigle
2006/0183548 A1 8/2006 Morris et al.
2006/0190654 A1 8/2006 Joy
2006/0205483 A1 9/2006 Meyer et al.
2006/0205509 A1 9/2006 Hirota
2006/0205510 A1 9/2006 Lauper
2006/0217198 A1 9/2006 Johnson
2006/0236352 A1 10/2006 Scott, III
2006/0248553 A1 11/2006 Mikkelson et al.
2006/0248564 A1 11/2006 Zinevitch
2006/0256865 A1 11/2006 Westerman
2006/0256868 A1 11/2006 Westerman
2006/0269120 A1 11/2006 Mehmadi et al.
2006/0285586 A1 12/2006 Westerman
2007/0004516 A1 1/2007 Jordan et al.
2007/0013547 A1 1/2007 Boaz
2007/0019826 A1 1/2007 Horbach et al.
2007/0028272 A1 2/2007 Lockton
2007/0037623 A1 2/2007 Romik
2007/0054695 A1 3/2007 Huske et al.
2007/0078009 A1 4/2007 Lockton et al.
2007/0083920 A1 4/2007 Mizoguchi et al.
2007/0086465 A1 4/2007 Paila et al.
2007/0087832 A1 4/2007 Abbott
2007/0093296 A1 4/2007 Asher
2007/0106721 A1 5/2007 Schloter
2007/0107010 A1 5/2007 Jolna et al.
2007/0129144 A1 6/2007 Katz
2007/0147870 A1 7/2007 Nagashima et al.
2007/0162328 A1 7/2007 Reich
2007/0183744 A1 8/2007 Koizumi
2007/0197247 A1 8/2007 Inselberg
2007/0210908 A1 9/2007 Putterman et al.
2007/0219856 A1 9/2007 Ahmad-Taylor
2007/0222652 A1 9/2007 Cattone et al.
2007/0226062 A1 9/2007 Hughes et al.
2007/0238525 A1 10/2007 Suomela
2007/0243936 A1 10/2007 Binenstock et al.
2007/0244570 A1 10/2007 Speiser et al.
2007/0244585 A1 10/2007 Speiser et al.
2007/0244749 A1 10/2007 Speiser et al.
2007/0265089 A1 11/2007 Robarts
2007/0294410 A1 12/2007 Pandya
2008/0005037 A1 1/2008 Hammad
2008/0013927 A1 1/2008 Kelly et al.
2008/0051201 A1 2/2008 Lore
2008/0066129 A1 3/2008 Katcher et al.
2008/0076497 A1 3/2008 Kiskis et al.
2008/0104630 A1 5/2008 Bruce
2008/0146337 A1 6/2008 Halonen
2008/0169605 A1 7/2008 Shuster et al.
2008/0222672 A1 9/2008 Piesing
2008/0240681 A1 10/2008 Fukushima
2008/0248865 A1 10/2008 Tedesco
2008/0270288 A1 10/2008 Butterly et al.
2008/0288600 A1 11/2008 Clark
2009/0011781 A1 1/2009 Merrill et al.
2009/0094632 A1 4/2009 Newman et al.
2009/0103892 A1 4/2009 Hirayama
2009/0186676 A1 7/2009 Amaitis et al.
2009/0163271 A1 9/2009 George et al.
2009/0228351 A1 9/2009 Rijsenbrij
2009/0234674 A1 9/2009 Wurster
2009/0264188 A1 10/2009 Soukup
2009/0271512 A1 10/2009 Jorgensen
2009/0325716 A1 12/2009 Harari
2010/0099421 A1 4/2010 Patel et al.
2010/0099471 A1 4/2010 Feeney et al.
2010/0107194 A1 4/2010 McKissick et al.
2010/0120503 A1 5/2010 Hoffman et al.
2010/0137057 A1 6/2010 Fleming
2010/0203936 A1 8/2010 Levy
2010/0279764 A1 11/2010 Allen et al.
2010/0296511 A1 11/2010 Prodan
2011/0016224 A1 1/2011 Riley
2011/0053681 A1 3/2011 Goldman
2011/0065490 A1 3/2011 Lutnick
2011/0081958 A1 4/2011 Herman
2011/0116461 A1 5/2011 Holt
2011/0130197 A1 6/2011 Bythar et al.
2011/0227287 A1 9/2011 Reabe
2011/0269548 A1 11/2011 Barclay et al.
2011/0306428 A1 12/2011 Lockton et al.
2012/0058808 A1 3/2012 Lockton
2012/0115585 A1 5/2012 Goldman
2012/0157178 A1 6/2012 Lockton
2012/0264496 A1 10/2012 Behrman et al.
2012/0282995 A1 11/2012 Allen et al.
2012/0295686 A1 11/2012 Lockton
2013/0005453 A1 1/2013 Nguyen et al.
2013/0072271 A1 3/2013 Lockton et al.
2013/0079081 A1 3/2013 Lockton et al.
2013/0079092 A1 3/2013 Lockton et al.
2013/0079093 A1 3/2013 Lockton et al.
2013/0079135 A1 3/2013 Lockton et al.
2013/0079150 A1 3/2013 Lockton et al.
2013/0079151 A1 3/2013 Lockton et al.
2013/0196774 A1 8/2013 Lockton et al.
2013/0225285 A1 8/2013 Lockton
2013/0225299 A1 8/2013 Lockton
2014/0031134 A1 1/2014 Lockton et al.
2014/0100011 A1 4/2014 Gingher
2014/0106832 A1 4/2014 Lockton et al.
2014/0128139 A1 5/2014 Shuster et al.
2014/0155130 A1 6/2014 Lockton et al.
2014/0155134 A1 6/2014 Lockton
2014/0206446 A1 7/2014 Lockton et al.
2014/0237025 A1 8/2014 Huske et al.
2014/0248952 A1 9/2014 Cibula et al.
2014/0256432 A1 9/2014 Lockton et al.
2014/0279439 A1 9/2014 Brown
2014/0287832 A1 9/2014 Lockton et al.
2014/0309001 A1 10/2014 Root
2014/0335961 A1 11/2014 Lockton et al.
2014/0335962 A1 11/2014 Lockton et al.
2014/0378212 A1 12/2014 Sims
2015/0011310 A1 1/2015 Lockton et al.
2015/0024814 A1 1/2015 Root
2015/0067732 A1 3/2015 Howe et al.
2015/0148130 A1 5/2015 Cibula et al.
2015/0238839 A1 8/2015 Lockton
2015/0238873 A1 8/2015 Arnone et al.
2015/0258452 A1 9/2015 Lockton et al.
2015/0356831 A1 12/2015 Osibodu
2016/0023116 A1 1/2016 Wire
2016/0045824 A1 2/2016 Lockton et al.
2016/0049049 A1 2/2016 Lockton
2016/0054872 A1 2/2016 Cibula et al.
2016/0082357 A1 3/2016 Lockton
2016/0121208 A1 5/2016 Lockton et al.
2016/0134947 A1 5/2016 Huske et al.
2016/0217653 A1 7/2016 Meyer
2016/0271501 A1 9/2016 Balsbaugh
2016/0361647 A1 12/2016 Lockton et al.
2016/0375362 A1 12/2016 Lockton et al.

(56) **References Cited**

U.S. PATENT DOCUMENTS

2017/0036110	A1	2/2017	Lockton et al.
2017/0036117	A1	2/2017	Lockton et al.
2017/0043259	A1	2/2017	Lockton et al.
2017/0053498	A1	2/2017	Lockton
2017/0065891	A1	3/2017	Lockton et al.
2017/0098348	A1	4/2017	Odom
2017/0103615	A1	4/2017	Theodosopoulos
2017/0128840	A1	5/2017	Croci
2017/0221314	A1	8/2017	Lockton
2017/0225071	A1	8/2017	Lockton et al.
2017/0225072	A1	8/2017	Lockton et al.
2017/0232340	A1	8/2017	Lockton
2017/0243438	A1	8/2017	Merati
2017/0249801	A1	8/2017	Malek
2017/0252649	A1	9/2017	Lockton et al.
2017/0259173	A1	9/2017	Lockton et al.
2017/0264961	A1	9/2017	Lockton
2017/0282067	A1	10/2017	Lockton et al.
2017/0296916	A1	10/2017	Lockton et al.
2017/0304726	A1	10/2017	Lockton et al.
2017/0345260	A1	11/2017	Strause
2018/0025586	A1	1/2018	Lockton
2018/0071637	A1	3/2018	Baazov
2018/0104582	A1	4/2018	Lockton et al.
2018/0104596	A1	4/2018	Lockton et al.
2018/0117464	A1	5/2018	Lockton et al.
2018/0140955	A1	5/2018	Lockton et al.
2018/0154255	A1	6/2018	Lockton
2018/0169523	A1	6/2018	Lockton et al.
2018/0190077	A1	7/2018	Hall
2018/0236359	A1	8/2018	Lockton et al.
2018/0243652	A1	8/2018	Lockton et al.
2018/0264360	A1	9/2018	Lockton et al.
2018/0300988	A1	10/2018	Lockton
2018/0318710	A1	11/2018	Lockton et al.
2019/0054375	A1	2/2019	Lockton et al.
2019/0060750	A1	2/2019	Lockton et al.
2019/0143225	A1	5/2019	Baazov

FOREIGN PATENT DOCUMENTS

CA	2279069		7/1999
CA	2287617		10/1999
EP	0649102	A3	6/1996
GB	2364485		1/2002
JP	11-46356		2/1999
JP	11-239183		8/1999
JP	2000-165840		6/2000
JP	2000-217094		8/2000
JP	2000-358255		12/2000
JP	2001-28743		1/2001
JP	2000-209563		7/2008
NZ	330242		10/1989
WO	01/039506	A2	5/2001
WO	01/65743	A1	9/2001
WO	02/03698	A1	10/2002
WO	2005064506	A1	7/2005
WO	2006004855		1/2006
WO	2006004856		1/2006
WO	2007002284		1/2007
WO	2007016575		2/2007
WO	2007041667		4/2007
WO	2008027811	A2	3/2008
WO	2008115858	A1	9/2008

OTHER PUBLICATIONS

Two Way TV Patent and Filing Map www.twowaytv.com/version4/technologies/tech_patents.asp.

Ark 4.0 Standard Edition, Technical Overview www.twowaytv.com/version4/technologies/tech_ark_professionals.asp.

"Understanding the Interactivity Between Television and Mobile commerce", Robert Davis and David Yung, Communications of the ACM, Jul. 2005, vol. 48, No. 7, pp. 103-105.

"Re: Multicast Based Voting System" www.ripe.net/ripe/maillists/archives/mbone-eu-op/1997/msg00100html.

"IST and Sportal.com: Live on the Internet Sep. 14, 2004 by Clare Spoonheim", www.isk.co.usk/NEWS/dotcom/ist_sportal.html.

"Modeling User Behavior in Networked Games byTristan Henderson and Saleem Bhatti", www.woodworm.cs.uml.edu/rprice/ep/henderson.

"SMS Based Voting and Survey System for Meetings", www.abbit.be/technology/SMSSURVEY.html.

"PurpleAce Launches 3GSM Ringtone Competition", www.wirelessdevnet.com/news/2005/jan/31/news6html.

"On the Perfomance of Protocols for collecting Responses over a Multiple-Access Channel", Mostafa H. Ammar and George N. Rouskas, IEEE INCOMFORM '91, pp. 1490-1499, vol. 3, IEEE, New York, NY.

Merriam-Webster, "Game" definition, <http://www.merriam-webster.com/dictionary/agme.pg.1.

Ducheneaut et al., "The Social Side of Gaming: A Study of Interaction Patterns in a Massively Multiplayer Online Game", Palo Alto Research Center, Nov. 2004, vol. 6, Issue 4, pp. 360-369.

http://help.yahoo.com/help/us/tourn/tourn-03.html.

Pinnacle, "The basics of reverse line movement," Jan. 19, 2018, Retrieved on Jan. 22, 2020 , http://www.pinnacle.com/en/betting-articles educational/basics-of-reverse-line-movement/QAH26XGGQQS7M3GD.

Gambling Commission,"Virtual currencies, eSports and social casino gaming-position paper," Mar. 2017, Retrieved on Jan. 22, 2020, http://gamblingcomission.gov.uk/PDF/Virtual-currencies-eSports-and -social-casino-gaming.pdf.

Sipko et al., "Machine learning for the prediction of professional tennis matches" In: MEng computing—final year project, Imperial College London, Jun. 15, 2015, http://www.doc.ic.ac.uk/teaching/distinguished-projects/2015/m.sipko.pdf.

Winview Game Producer, "Live TV Sports Play Along App WinView Games Announces Sponsorship With PepsiCo To Start This Holiday Season," In Winview Games. Dec. 21, 2016, Retrieved on Jan. 21, 2020 from , http://www. winviewgames./press-release/live-tv-sports-play-along-app-winview-games-announces-sponsorship-pepsico-start-holiday-season/.

The International Search Report and The Written Opinion for the PCT/US2019/054859 dated Feb. 4, 2020.

The International Preliminary Report dated Apr. 22, 2021 for the application PCT/US2019/054859.

* cited by examiner

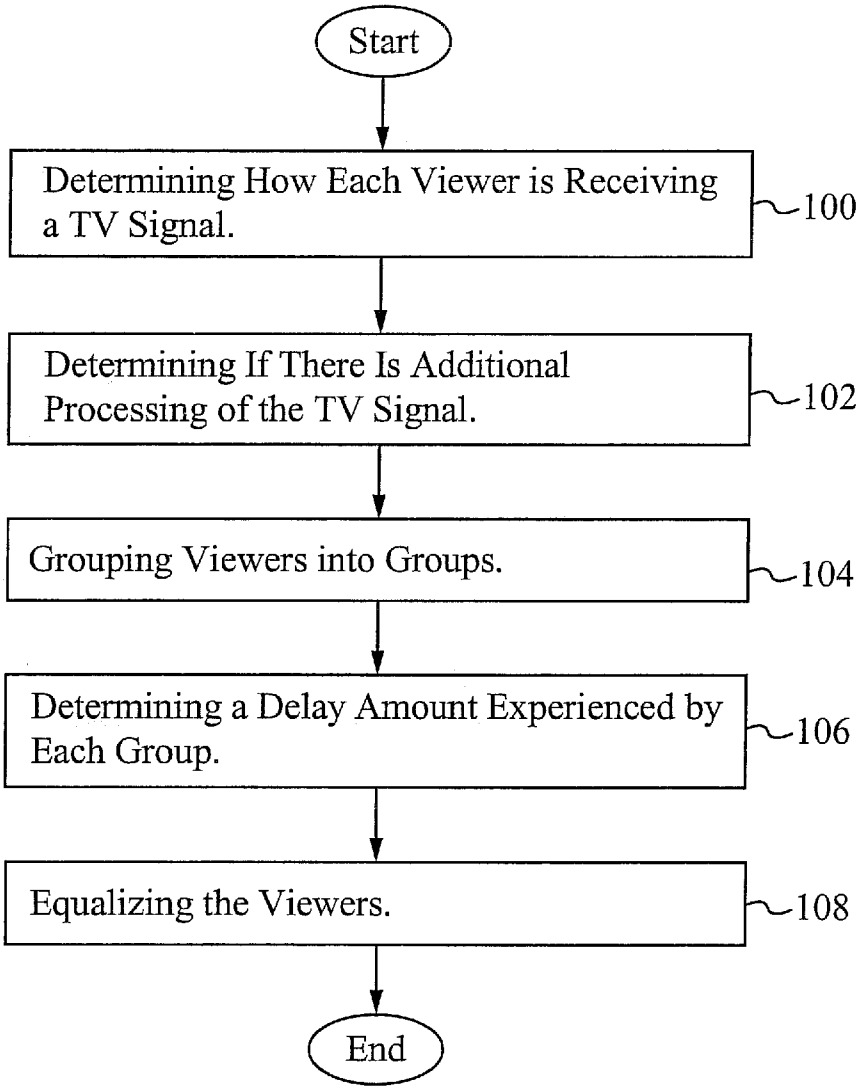

Start
Determining How Each Viewer is Receiving a TV Signal.
100
Determining If There Is Additional Processing of the TV Signal.
102
Grouping Viewers into Groups.
104
Determining a Delay Amount Experienced by Each Group.
106
Equalizing the Viewers.
108
End

Fig. 1

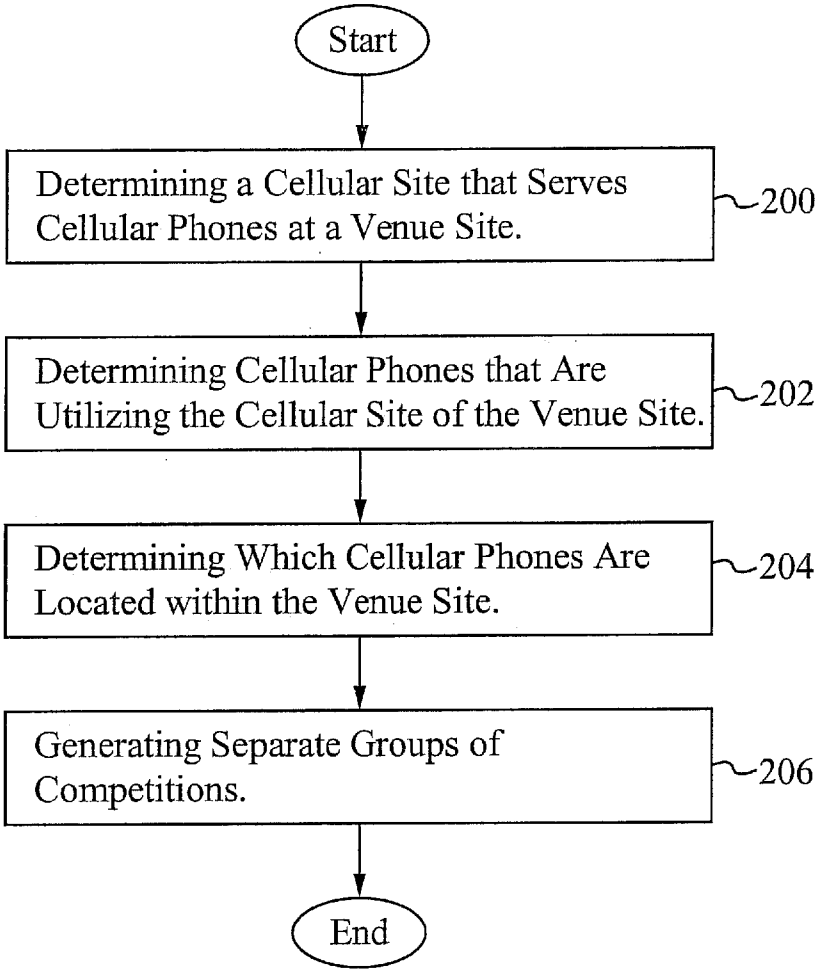

Start
Determining a Cellular Site that Serves Cellular Phones at a Venue Site.
200
Determining Cellular Phones that Are Utilizing the Cellular Site of the Venue Site.
202
Determining Which Cellular Phones Are Located within the Venue Site.
204
Generating Separate Groups of Competitions.
206
End

Fig. 2

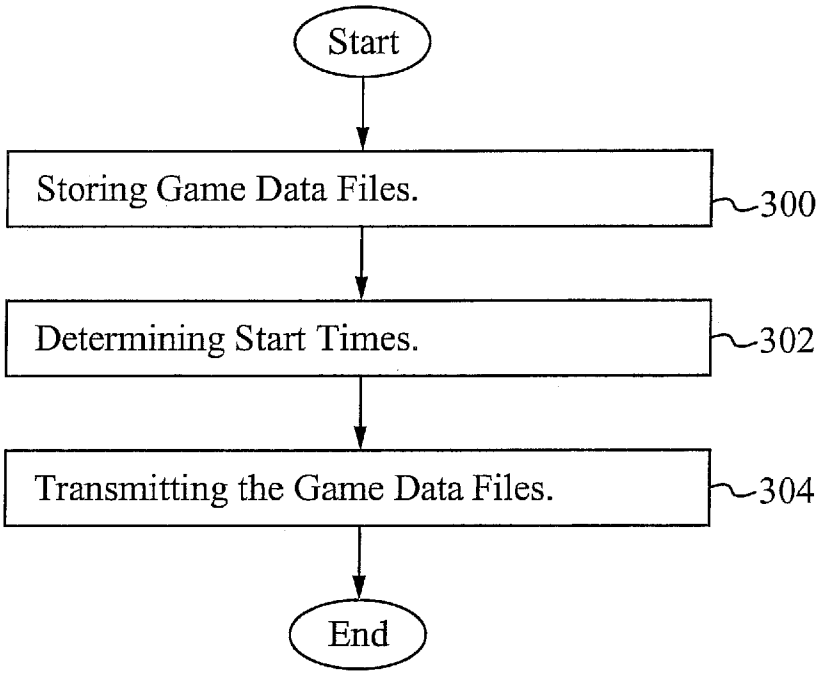

Start
Storing Game Data Files.
300
Determining Start Times.
302
Transmitting the Game Data Files.
304
End

Fig. 3

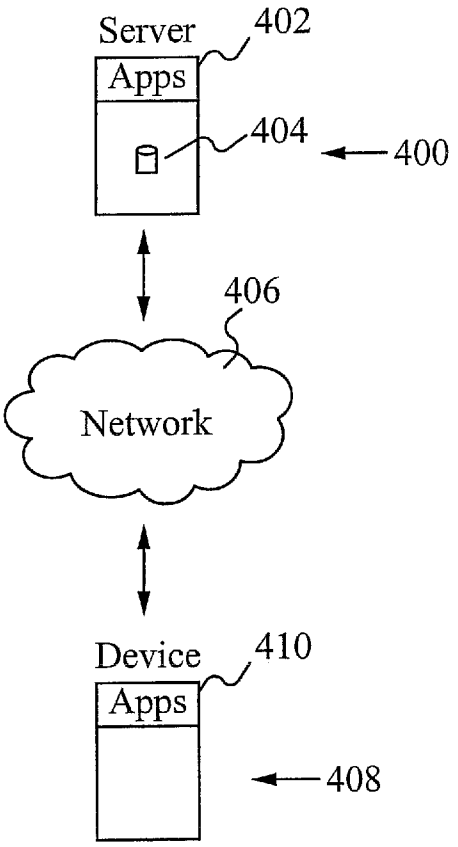


Fig. 4

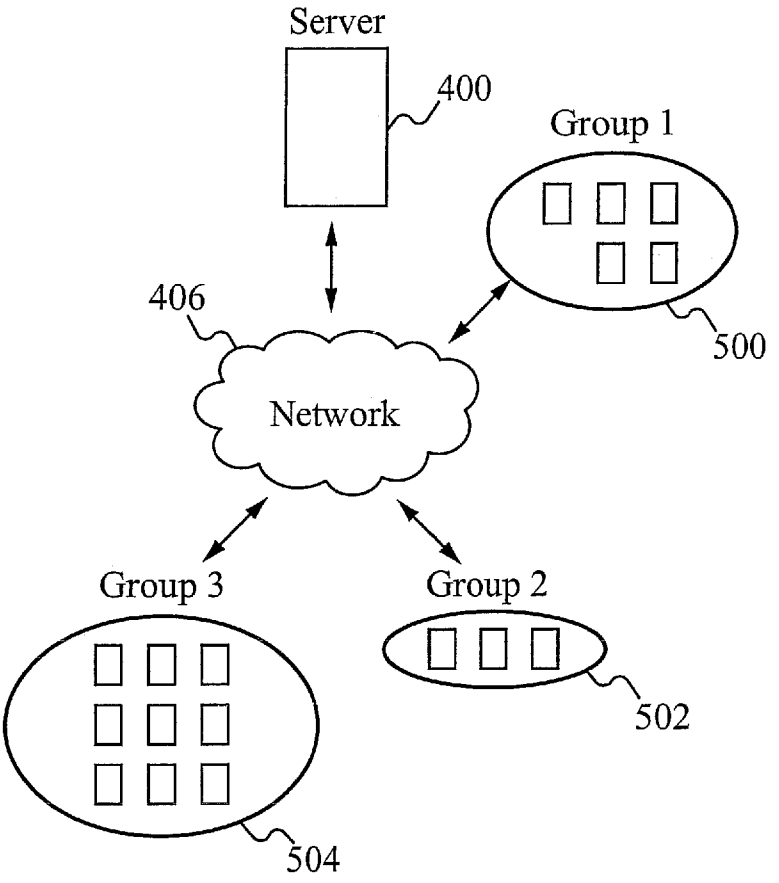


Fig. 5

METHODOLOGY FOR EQUALIZING SYSTEMIC LATENCIES IN TELEVISION RECEPTION IN CONNECTION WITH GAMES OF SKILL PLAYED IN CONNECTION WITH LIVE TELEVISION PROGRAMMING

RELATED APPLICATION(S)

This Patent Application is a continuation of co-pending U.S. patent application Ser. No. 16/752,541, filed Jan. 24, 2020, titled "A METHODOLOGY FOR EQUALIZING SYSTEMIC LATENCIES IN TELEVISION RECEPTION IN CONNECTION WITH GAMES OF SKILL PLAYED IN CONNECTION WITH LIVE TELEVISION PROGRAMMING," which is a continuation of U.S. patent application Ser. No. 16/228,583, filed Dec. 20, 2018, titled "A METHODOLOGY FOR EQUALIZING SYSTEMIC LATENCIES IN TELEVISION RECEPTION IN CONNECTION WITH GAMES OF SKILL PLAYED IN CONNECTION WITH LIVE TELEVISION PROGRAMMING," which is a continuation of U.S. patent application Ser. No. 15/963,970, filed Apr. 26, 2018, titled "A METHODOLOGY FOR EQUALIZING SYSTEMIC LATENCIES IN TELEVISION RECEPTION IN CONNECTION WITH GAMES OF SKILL PLAYED IN CONNECTION WITH LIVE TELEVISION PROGRAMMING," which is a continuation of U.S. patent application Ser. No. 15/625,988, filed Jun. 16, 2017, titled "A METHODOLOGY FOR EQUALIZING SYSTEMIC LATENCIES IN TELEVISION RECEPTION IN CONNECTION WITH GAMES OF SKILL PLAYED IN CONNECTION WITH LIVE TELEVISION PROGRAMMING," which is a continuation of U.S. patent application Ser. No. 14/992,937, filed Jan. 11, 2016, titled "A METHODOLOGY FOR EQUALIZING SYSTEMIC LATENCIES IN TELEVISION RECEPTION IN CONNECTION WITH GAMES OF SKILL PLAYED IN CONNECTION WITH LIVE TELEVISION PROGRAMMING," which is a continuation of U.S. patent application Ser. No. 14/140,198, filed Dec. 24, 2013, titled "A METHODOLOGY FOR EQUALIZING SYSTEMIC LATENCIES IN TELEVISION RECEPTION IN CONNECTION WITH GAMES OF SKILL PLAYED IN CONNECTION WITH LIVE TELEVISION PROGRAMMING," which is a continuation of U.S. patent application Ser. No. 13/681,242, filed Nov. 19, 2012, titled "A METHODOLOGY FOR EQUALIZING SYSTEMIC LATENCIES IN TELEVISION RECEPTION IN CONNECTION WITH GAMES OF SKILL PLAYED IN CONNECTION WITH LIVE TELEVISION PROGRAMMING," which is a divisional of U.S. patent application Ser. No. 13/403,845, filed Feb. 23, 2012, titled, "A METHODOLOGY FOR EQUALIZING SYSTEMIC LATENCIES IN TELEVISION RECEPTION IN CONNECTION WITH GAMES OF SKILL PLAYED IN CONNECTION WITH LIVE TELEVISION PROGRAMMING," which is a continuation of U.S. patent application Ser. No. 11/786,992, filed Apr. 12, 2007, (now U.S. Pat. No. 8,149,530), titled, "A METHODOLOGY FOR EQUALIZING SYSTEMIC LATENCIES IN TELEVISION RECEPTION IN CONNECTION WITH GAMES OF SKILL PLAYED IN CONNECTION WITH LIVE TELEVISION PROGRAMMING," which claims priority under 35 U.S.C. § 119(e) of the co-owned U.S. Provisional Patent Application No. 60/791,793, filed Apr. 12, 2006, and titled "A METHODOLOGY FOR EQUALIZING SYSTEMIC LATENCIES IN TELEVISION RECEPTION IN CONNECTION WITH GAMES OF SKILL PLAYED IN CONNECTION WITH LIVE TELEVISION PROGRAMMING" which are also all hereby incorporated by reference in their entireties.

FIELD OF THE INVENTION

The present invention relates to the field of distributed gaming. More specifically, the present invention relates to the field of distributed gaming utilizing a mobile device.

BACKGROUND OF THE INVENTION

In the United States alone there are over 170 million registered cellular phones. With the expiration of the U.S. Pat. No. 4,592,546 to Fascenda and Lockton, companies are able to now use the cellular phone and other mobile communication devices utilizing a multicast network to control television viewers in games of skill based upon predicting, for example, what the quarterback may call on the next play within a football game. Both prime time and programs syndicated on a market-by-market basis lend themselves to games of skill. In addition, games of skill with a common start time can be conducted simultaneously among cellular phone owners, based on classic card, dice, trivia, and other games. In order to avoid the anti-gaming laws in the various states, the winners must be determined by the relative skill, experience and practice of the player in each discrete game.

U.S. Pat. No. 5,813,913 ('913) to Berner and Lockton provides for a central computing system which includes a means of grouping participants having similar skill levels together in simultaneous, but separate, levels of competition playing an identical game. The relative performances are communicated to only those participants competing at the same skill level. The '913 patent also provides for a wireless receiving device to permanently store the specific skill level for each participant for each type of common event such as those based on televised sports or game shows. The '913 patent provides for a telephonic link at the completion of the game to collect information and update the skill level of the participants of a particular game. When a person achieves sufficient points or meets other objective criteria to graduate into another skill level, a method is provided for accomplishing this in the central computer and then transmitting an alert to the participant notifying them of their promotion. The '913 patent describes awarding prizes and providing recognition for the members of each discreet skill level in a common game. All users, no matter what level they are on, receive the same number of questions and thus the possibility of earning the same number of points. Thus direct comparisons between users at different levels, although not encouraged are possible. Such comparisons between players of disparate skills can lead to user discouragement.

Games of skill and chance have an intrinsic excitement and entertainment value. Any game is greatly enhanced by a participant's ability to know how their performance compares in relation to other participants and/or to historical performance for the game throughout the contest. As with any game of skill, competition among friends, or with strangers of similar experience, or the ability at ones option, sometimes for an extra consideration, to compete in a separate team or individual contest, offers the opportunity of increased enjoyment and prizes.

Games of skill that rely on participation by watching an event on a television have potential latency issues since television signal reception is not synchronized nationwide. For example, a participant in Texas using a satellite dish network may experience a 3 second delay compared to an

individual in California using a cable network. Also, there are delays between individuals attending a game live and those watching the game live on television. Furthermore, for taped programs, both those shown to viewers in time zones or those syndicated on a market-by-market basis, there are potential delay issues as experienced with the live broadcasts in addition to other possible differences in timing of the broadcasts. Therefore, to maintain user enjoyment and fairness for all participants, these delays must be neutralized.

SUMMARY OF THE INVENTION

A method of and system for handling latency issues encountered in producing real-time entertainment such as games of skill synchronized with live or taped televised events is described herein. There are multiple situations that are dealt with regarding latencies in receiving a television signal with respect to real-time entertainment based on the unfolding games played along with the telecasts. Systemic delays, arbitrarily imposed delays of a broadcast signal and variances in the precise broadcast times of taped television programs have to be equalized so as to provide fair entertainment.

In one aspect, a method of equalizing effects of latency differences in a game of skill comprises grouping participants into a set of cohorts viewing a telecast delivered by identical transmission and reception systems, determining an amount of delay for each cohort in the set of cohorts and substantially equalizing the set of cohorts through adjustment of the amount of delay. The method further comprises determining how each participant receives a television signal. How each participant receives a television signal is selected from the group consisting of an over the air broadcast, a cable system and a satellite system. The participants are grouped based on how the participants receive a television signal. The method further comprises determining if there is additional processing of a television signal in a reception location. The additional processing occurs within a participant's location selected from the group consisting of a public place, a home, an office and a bar. Since each cable system may impose different delay at their head-ends, the specific cable provider is identified. Determining the amount of delay comprises one or more of requiring the participants to answer questions related to their television system service, requiring the participants to mark on a game playing client device, a precise time that a predetermined audio or visual event is viewed on a television program, utilizing a GPS function in a cellular phone to determine a physical location of each of the participants, utilizing an employee of a game producer who is a member of each cohort in the set of cohorts to determine the amount of delay, inserting an artifact in the telecast in which the participants respond to, and establishing the amount of delay through an automated system which samples an audio or video track of a satellite, cable or over the air broadcast television signal, linked to a game server, to provide information related to a precise arrival of an underlying television picture. An average is taken when requiring participants to mark the precise time the predetermined audio or visual event is viewed on the television program. Equalizing the set of cohorts comprises at least one of time stamping the amount of delay on a game lock out signal, imposing the amount of delay on an entire game data stream and sending game control data to the participant cohorts at the same time where client software delays presentation of game data based on a precise time of reception of the telecast by the group.

In another aspect, a method of preventing a first set of participants at a live event from having an advantage over a second set of participants watching the live event on television comprises determining a cellular site that serves a set of cellular phones at a venue site, determining the set of cellular phones that are utilizing the cellular site of the venue site, determining a subset of cellular phones within the set of cellular phones that are located within the venue site and generating separate groups of competitions based on the subset of cellular phones within the set of cellular phones that are located within the venue site. A first group within the separate groups of competitions includes only the first set of participants and a second group within the separate groups of competitions includes only the second set of participants. An application on a server determines the cellular site, the set of cellular phones utilizing the cellular site and the subset of cellular phones located within the venue site. An application on each cellular phone within the subset of cellular phones determines if the cellular phone is located within the venue site.

In another aspect, a method of equalizing effects of latency issues with a taped television broadcast comprises storing a set of data files on a server, determining one or more start times and transmitting the set of files from the server to each mobile device at a transmission time corresponding to an appropriate start time for the mobile device. An application starts using the set of files at the one or more start times. The set of data files are game data files. Determining the one or more start times includes at least one of utilizing an employee of a game provider based on visual observation of a telecast, utilizing at least one of an audio and video recognition system with online access to the broadcast for each separate market which provides real-time tracking of the broadcast to the server, adding at least one of an audio and video event in the television broadcast which is recognizable at a starting point, designating at least one of the audio and video event in the television broadcast which is recognizable as the starting point, utilizing an audio signal, inserted within the broadcast recognizable by an audio receiver of the mobile device, and using a vertical blanking interval.

In yet another aspect, a system for equalizing effects of latency issues for a game of skill comprises a mobile device and a server coupled to the mobile device wherein the server sends a lockout signal at an appropriate time based on a measured amount of delay to prevent a user from submitting a response after they see the outcome. The mobile device is within a group of mobile devices. The server determines which group the mobile device is in. The server stores game control data and transmits the game control data to the mobile device. The game control data includes delay information for implementing the lockout signal. The server contains a location determination application for determining the location of the mobile device. The mobile device contains a location determination application for determining the location of the mobile device. Variances in delays in receiving the television signal determine delays in transmitting applicable data files within a television signal reception path

In another aspect, a device for equalizing effects of latency issues for a game of skill comprises a storage device and a set of applications contained within the storage device for sending a lockout signal at an appropriate time based on a measured amount of delay to prevent a user from submitting a response after they see the outcome. The set of applications determines which group mobile devices coupled to the device are in. The device stores game control

data and transfers the game control data to mobile devices. The game control data includes delay information for implementing the lockout signal. The set of applications includes a location application for determining the location of mobile devices. The amount of delay accounts for delays within a television signal reception path.

A network of devices comprises a plurality of mobile devices and a server coupled to the mobile devices wherein the server groups the plurality of mobile devices into a set of cohorts and wherein the server sends a lockout signal at an appropriate time based on an amount of delay to prevent users from submitting a response after they see the outcome. Each cohort within the set of cohorts is based on a signal reception path. The signal reception path is selected from the group consisting of an over the air network, a cable network and a satellite network. The server stores game control data and transfers the game control data to each mobile device within the plurality of mobile devices. The game control data is specific for each cohort within the set of cohorts. The game control data includes delay information for equalizing the lockout signal. The amount of delay accounts for delays within a television signal reception path.

BRIEF DESCRIPTION OF THE DRAWINGS

FIG. **1** illustrates a flowchart of a process of preventing latency issues from giving an advantage to some participants.

FIG. **2** illustrates a flowchart of a process of preventing participants at a live event from having an unfair advantage over participants watching on television.

FIG. **3** illustrates a flowchart of a process of handling latency issues for taped programs.

FIG. **4** illustrates a graphical representation of an embodiment of the present invention.

FIG. **5** illustrates a graphical representation of a network of devices of the present invention.

DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENT

U.S. Provisional Patent Application No. 60/692,356, filed Jun. 20, 2005, and entitled "SYSTEMS AND METHODOLOGIES ENABLING A CELL PHONE BASED SUBSCRIPTION SERVICE OFFERING A VARIETY OF SCHEDULED GAMES IN CONNECTION WITH LIVE TELEVISION PROGRAMMING," is incorporated by reference herein.

The present invention addresses three separate classes of latency issues for the length of time it takes a television signal to reach a viewer in producing real-time entertainment such as games of skill synchronized with television programming. The latency issues are: 1) systemic propagation delays in the delivery of a television signal to a receiver, 2) arbitrarily imposed delays of a broadcast television signal and 3) variances in precise broadcast times of segments of taped television programs between local and national commercials, sold through syndication to individual television stations.

Systemic Propagation Delays

There are specific challenges facing a service comprised of games or other entertainment played by remote participants utilizing cellular phones or the Internet, in connection with a live or taped telecast. Examples are live baseball, basketball and football games, taped game shows such as Wheel of Fortune™ and Jeopardy™ or other television programming such as predicting the winners of the Oscars. In a game of skill, for example, fair competition necessitates that a fast paced game, based on the unfolding television action has a level playing field for all participants regardless of how they receive their television signal. Propagation delays result from, among other things, the number of satellite hops required to deliver the signal, the method of processing and rebroadcasting the signal after it is received by cable systems head ends or an over the air broadcast television station, and whether or not the signal is further processed for high definition television. Furthermore, digital television recording systems (DVRs) such as TiVo™ are also able to generate delays in the viewing of the picture after receipt via satellite or cable. These delays are able to result in a difference between the first signal received and the last received of more than several seconds.

People have an unsatisfactory experience and/or others are able to gain a potential competitive advantage from the variances in the exact time one viewer sees an event on their television versus another competitor who receives their television signal through a different delivery path. In the U.S., the 120 million television homes receive their signal either through an over the air broadcast, cable system or via satellite delivery. Each delivery system can impose propagation delays of various time lengths. If the delay between the time a viewer with the least amount of delay and the person receiving the signal with the greatest amount of delay exceeds several seconds, some inequalities in game experience and play are able to result.

One example is a game is based upon a football telecast, wherein competitors predict the play that the coaches and/or quarterback call prior to the snap of the ball. The competitor's prediction is based among other things on their observation of the down, distance and the offensive and defensive formations on the field and tendencies of the teams in these situations. Such a game utilizes a "lock out" signal, as described in the U.S. Pat. No. 4,592,546 to Fascenda, entitled "Game of Skill Playable by Remote Participants in Conjunction with a Live Event," which is incorporated by reference herein, to prohibit the entry of predictions after the competitor sees the play begin to unfold, at the snap of the ball. The time stamped "lock out" signal is generated by a game producer also viewing the same telecast from a different location. If the game producer is viewing a television signal several seconds before some competitors and generating a time stamp based on that event, an advantage is able to result if the difference in the time stamp and the receipt of the "lock out" signal is more than several seconds earlier in relation to another competitor's television signal which is delayed. During this period of time, for example, on a first or second down situation, a competitor receives the "lock out" just as the quarterback receives the snap and the corresponding television signal at the same time as the game producer while another competitor with a delayed television signal, receives a "lock out" signal while the quarterback is approaching the line of scrimmage. In another example, if the game producer is viewing a signal after a viewer, a competitor might see the quarterback start to drop back into a "shot gun" formation, making the likelihood of a pass considerably higher. This latter player might have time to change his prediction from, "run" to "pass" before receiving a "lock out" generated at the snap of the ball. A person consistently receiving a "lock out" later than another competitor might, through the course of the game, gain some competitive advantage.

While it is not clear that sufficient enough competitive advantage is gained between a competitor receiving his "lock out" signal precisely at the snap of the ball and one

who is locked out a few seconds prior to the snap of the ball, this discrepancy could present the appearance of a playing field that is not level, and one of the primary benefits of the system addressed in the present invention is to ensure the competitors feel they are on equal footing.

The present invention solves the above described issue through a system and method to effectively equalize systemic propagation delay variances to a required level dictated by the demands and rules of a particular game, so that a material competitive advantage is not obtained and the user experience is optimized for all players.

The solution first relies on the determination of how each viewer is receiving their television signal (e.g. via an over the air broadcast in a metropolitan area, via a particular cable system or a particular satellite system). All subscribers to a particular service provider or who are receiving an over the air broadcast in a specific metropolitan area will receive the signal at their location at the same time. It is also able to be determined if there is further processing of the signal within the homes, office, bar and others, which could further increase the total length of the propagation delay. Examples would be the use of a DVR, such as TiVo™. The present invention relies on a variety of methodologies which are able to be utilized to determine the time difference between the reception of the television picture being utilized by the central game production facility where "lock out" signals are generated and each separate group of viewers around the country or around the world.

For this system, the total viewing population for a telecast is divided into segments or blocks of viewers referred to as "cohorts." For example, the 2 million inhabitants of the San Francisco Bay Area would be divided into approximately 1 over the air broadcast, 3 satellite independent providers and several cable "head ends" or central broadcast points serving a "cohort." This information would be gathered at a central game server, and all players registered to play in a particular contest would be assigned to a specific cohort of viewers.

The following are some methodologies for determining the delays experienced by various cohorts which are able to be used in combination or separately.

In one methodology, upon joining the service and prior to initial game play, subscribers and competitors are required to identify the method by which they receive their television signal and identify the cable or satellite service provider and answer questions relative to whether or not they subscribe to an analog or digital high definition service or utilize a DVR. This information is able to be verified by sending questions to their cellular phones concerning commercials, station breaks and the precise time they are viewed or utilizing other information only seen by members of that cohort.

In another methodology, a routine is established upon entry into the game where the individual viewer is asked to mark the precise time a predetermined audio or visual event in the television program occurs, such as the initial kickoff, which would establish the deviation of their receipt of their television picture from the television signal utilized by the game producers. While some viewers might attempt to cheat by delaying their input, the earliest entries from the cohorts in this group would be averaged to establish the accurate delta between the receipt of the telecast by the production crew and those in each discrete sub group of viewers.

In another methodology, the GPS function in the cellular phone is used to determine the physical location of a viewer which is matched to a database of cable lead ends or over the air broadcast stations available to a consumer in that precise location.

In another methodology, employees of the game producer who are members of the subgroups which constitute the competitors/viewers, e.g. a subscriber to Comcast Cable in San Francisco, are utilized by the game service provider. These individuals would provide the current propagation delay information sent to the game server utilizing their identification of a recognizable event they observe on their television set, such as the initial snap of the ball.

In another methodology, audio or video artifacts or information done in cooperation with the television signal provider are inserted which must be immediately responded to by the competitor to verify the source of their television signal or monitored at cooperative viewers' television sets.

In another methodology, the various delays through an automated system linked to the game server, which continuously samples the audio or video track of the underlying satellite, cable or over the air broadcast television signals are established around the country to provide the information of the precise arrival of the underlying television picture.

Utilizing software resident in the game control server, game control data for each set of viewers/competitors of the game in progress who are receiving their television picture through the same source are batched together by the game control server, and the appropriate delay is either time stamped on the game "lock out" signals, or is imposed on the entire data stream so that competitors receiving their television information slightly behind or ahead of others gain no material competitive advantage. Another method is for the game control server to send all the game control data to all of the viewers/competitors of the game at the same time, and the client software is able to delay the presentation of the game data based on the viewers' cohort.

Utilizing these methodologies to measure the delays in each cohort, each cohort of viewers would have artificial time delays on the game control information imposed by the game control server, which would substantially equalize the receipt of "lock out" data relative to the event triggering the "lock out," based on the underlying television programming, for example, the snap of the football. Players receiving the television signals in advance of the one with the slowest receipt of the television signal would receive "lock out" signals slightly delayed or time stamped with a slightly later time as described in U.S. Pat. No. 4,592,546. By providing a correspondingly delayed lock out to a viewer receiving their signal later, a potential advantage is mitigated.

Alternatively, this time equalization from cohort to cohort could, for example, involve artificially delaying the transmission of the game control data stream sent to all competitors cell phones or other mobile devices by the appropriate amount of seconds, to sufficiently minimize the advantage a player with a few more seconds of television based information would have. For example, by time stamping the "lock out" signal at an earlier event, such as when the team breaks from the huddle, the chance of some cohorts seeing the actual beginning of the play is eliminated and the discrepancy in propagation delay provides little or no advantage.

FIG. **1** illustrates a flowchart of a process of preventing latency issues from giving an advantage to some participants. In the step **100**, it is determined how each viewer receives a television signal, where possibilities include an over the air broadcast, a particular cable system or a particular satellite system. In the step **102**, it is determined if there is additional processing of the television signal when after the signal enters a viewer/participant's house, office, bar or other location from an item such as a DVR. In the step **104**, the viewers/participants are grouped into groups also

referred to as cohorts. In the step **106**, a delay amount is determined for each group. The delay amount is able to be determined by the one or more methods as described above. In the step **108**, the viewers/participants are equalized. The methods of equalization vary, but some examples include time stamping on the game "lock out" signals, imposing a time stamp on the entire data stream so that competitors receiving their television information is slightly behind or ahead of others gain no material competitive advantage. Another method is for the game control server to send all the game control data to all of the viewers/participants of the game at the same time, and the client software is able to delay the presentation of the game data based on the viewers' group.

Arbitrarily Imposed Delays on the Broadcast of the Signal and the Physically Present Competitor

As a result of the Janet Jackson half time show episode at the 2004 Super Bowl, some networks have announced their intentions to impose up to a 7 second delay on telecasts of live sporting events. More recently an obscenity uttered by a competitor at the conclusion of a live NASCAR race has resulted in another network announcing it may impose a 5-7 second delay on future broadcasts of NASCAR races. These arbitrarily imposed delays are a significantly longer duration than those resulting from the above described propagation delays of the broadcast television or cellular network control information.

A distinct advantage is able to arise for a game player who is physically present at an event being televised which is the basis of a contest of skill in the home, or other location, separate from the live game venue. This is because in certain instances they will receive "lock out" signals generated for competitors among the television viewing audience, particularly if the game producer is not physically present at the venue, but producing by viewing a telecast. This discrepancy would permit prediction entry as much as 7 seconds later than those watching an artificially delayed television picture. This magnitude of delay can result in a significant competitive advantage for the game player who is physically present. For example, a soccer or hockey contest of skill might contain an element where a competitor is given a limited number of opportunities to predict if there will be a "shot on goal" within the next 5 seconds. The 5 second advantage to the competitor physically present would be significant, because the receipt of a lockout signal generated for the huge television audience could occur after a shot had occurred.

In a contest based on a football game, a competitor present at the stadium would receive their "lock out" signals after the play was underway and could often determine whether the play was a pass or a run prior to receipt of the lockout signal. It is also likely that other live televised events such as The Oscars, Grammy's, beauty contests and other television programming that can support games of skill would impose delays on the telecast for the same or different reasons, also providing the opportunity for a competitive advantage for those who are attending the event in person.

The cellular telephone system currently has methodologies to determine a user's physical location. The 911 emergency laws mandate the cellular systems to have the capability of determining the location of a 911 emergency caller within 150 feet. More sophisticated approaches combine cellular site location technology with geosynchronous positioning satellite capabilities. Companies like Qualcomm™ have implemented various location technologies such as Snaptrack, Snap Smart and Snapcore, which provide a cellular phone's physical location within a matter of yards.

For each televised live event, the physical venue for this event would be known by the organizer of a game of skill in advance. Therefore, it is possible to determine for each contest of skill the specific cellular sites which will serve cellular phone owners physically present at that venue. A methodology is employed to identify all of the cellular phones logging into the game server registering to play the game of skill which are co-located within cellular sites servicing the stadium or auditorium where the televised live event is taking place. The present invention is also able to involve a communication methodology between the cellular carrier and the game control computer software contained in the game application resident on a game competitor's phone, which would identify the cellular phone physically in the stadium.

Before the start of the contest of skill, the system informs the central computer of the game selected to be played by each competitor, for example, the San Francisco 49ers versus the New York Giants. The central game control server's software would hold current information on the physical location of the stadium of each game, for example, Candlestick Park in South San Francisco, and the cellular sites covering this location. The software resident on the cellular phone or on the server then identifies the phone as one located physically at the telecast game's venue.

To ensure that potential competitors at the live venue are able to also compete in a contest of skill, the central game server will separate the scoring data and game control data for competitors using these cellular phones in this specific location from the general pool of competitors who are not so located, but watching the game via television. A separate contest is then generated and scored for those competitors who have the advantage of viewing the event live, and a separate prize pool is awarded. This separate game would be produced though the observation of the actual game physically at the venue or through the operation of a non-delayed satellite feed.

If it is ultimately determined that certain groups of television viewers, as opposed to live event attendees, who are competitors in these games of skill are gaining sufficient enough competitive advantage, segregating those players at the extreme ends of the propagation delays, into two or more separate contests with separate sets of prizes, may also be employed as described above. For example, separate contests for satellite viewers versus cable and over the air viewers are able to be generated.

FIG. **2** illustrates a flowchart of a process of preventing participants at a live event from having an unfair advantage over participants watching on television. In the step **200**, a cellular site that serves cellular phones at a venue site is determined for each contest of skill. For example, if a game of skill is played for a game between the San Francisco 49ers and the Oakland Raiders at Candlestick Park in South San Francisco, a specific cellular site serves the cellular phones in that location. In the step **202**, the cellular phones that are utilizing the cellular site of the venue site and are participating in the game of skill for that event are determined. For example, if there are 1,000 cellular phone users in Candlestick Park who register to play in a game of skill involving the 49ers and the Raiders, they are detected by the system. In the step **204**, it is determined if the cellular phone is located within the venue site. The determination is made by comparing the current cellular information with information stored on a server indicating the location of each venue such as Candlestick Park. Based on the determination in the step **204**, separate groups are generated in the step **206**. A group is generated for users that are located at the live venue, and

a group is generated for those players that are watching live on television. Therefore, the live players who do not experience any delay compete against each other, and television viewers compete with others television viewers who have a delay.

In addition to implementing the above-mentioned solutions to latency issues, additional groups are able to be generated if the delays between signal providers are not resolved. For example, all viewers with satellite television signals compete against each other, and all cable television viewers compete against each other, with no cross competition.

Taped and Syndicated Television Programs

A separate but related latency problem arises in the case of syndicated television shows, which are by necessity pre-taped. Examples are game shows like Wheel of Fortune™ and Jeopardy™. These pre-recorded television game shows are generally syndicated, meaning they are sold to a specific television station on an exclusive lease for the local television market served by the station's signal. The television stations generally air these half hour episodes at various times in "prime time access," which is generally considered between 6-8 pm. Therefore, with **3** different time zones in the United States, the start times will differ from market to market. In addition, the precise time each commercial bracketed television show segment that is broadcast is able to vary by a few seconds based on the time each station's engineering personnel starts the show's segments after the insertion of local and national commercials. Thus, for a show like Jeopardy™, there might be over 100 separate slightly different broadcasts from a time standpoint for a single episode of Jeopardy™ on a given day. In addition, these syndicated telecasts can also experience the same propagation delays as described above.

Contests of skill on cellular phones around these syndicated telecasts are produced with the cooperation of the game show producers, and game data files are produced which are precisely time-synchronized to the final video tape of the television game show. These files must be precisely synchronized and a delay of just a few seconds could give an unfair competitive advantage to a viewer who is receiving their "lock out" signal later than another competitor in a fast paced game like Jeopardy™. The game data files must be synchronized with the television show at the beginning of the program and again as the show returns to the game competition from each commercial break.

This solution addresses the separate, but related problems of synchronizing game data files with the broadcast of prerecorded and syndicated games, entertainment, reality or other television programming that is aired in different time zones at the choice of the purchasing television station. As opposed to live sporting events, the game production for this genre of programming is not done live through real-time observation of the unfolding telecast but is produced in advance with the cooperation of the show producer as a time synchronized file utilizing the final edited for broadcast, television program.

In general, the game data files are divided into separate "segments" which comprise the entire television program and aired between the insertion of national, regional and local advertising. As the television program returns from the opening commercials, the initial game or entertainment segment is launched by the game producer, synchronized to the playing of the television tape, and the data files for this segment would end with the first commercial break. The other game "chapters" are resynchronized as each segment of the telecast resumes from commercial break. The local telecasts might have variations of anywhere from 1 to 5 seconds, or more, resulting from the use of different commercials by different stations, and the variances in the local production by the engineering management of the syndicated telecasts.

This invention protects a system which first determines all of the separate and unique television markets where the cellular phone service will be offered in connection with a syndicated, taped version of an underlying television program, for example, Jeopardy™. Network broadcasts usually air in three separate time zones. This information is available from the shows syndicator, for example, Jeopardy™, the syndicator King World™ or Sony™, the show's licensor. This information is also publicly available through the various television guides. The game production servers hold the pre-produced game data files to be broadcast to the cellular phones of the participating subscribers, containing, for example, the correct answers and possibly some intentionally wrong multiple choice answers in the case of Jeopardy™ or other multiple choice based game shows. The server begins the broadcast of its time synchronized files for each discrete telecast of a single television program at a precise start point for each "segment" or chapter. With knowledge of the precise timing of the discrete segments of the broadcast, for each separate syndicated market, the server transmits the pre-recorded files in most cases, at a slightly separate and different time to each viewer who is viewing the telecast in a particular market via a particular broadcast, satellite or cable signal.

The precise start times of the beginning episode of a game show and the start times of the other segments, beginning as the show resumes after a national and local commercial are delivered to the server through various methodologies.

One methodology requires the cooperation of an employee of the game provider based on visual observation of the telecast for that market, utilizing a personal computer and the Internet, or by utilizing their local cellular phone, all coupled to the game server.

Another methodology includes utilizing an audio or video recognition system with online access to the broadcast of the underlying television program for each separate market which provides real-time tracking of the television broadcast to the game control server, ensuring the game data file is able to be precisely synchronized to the television picture. Information is also able to be inserted in a Vertical Banking Interval (VBI) of the taped syndicated show and tracked online in real time by the game control server. For remote telecasts and online connection from a remote device, reading data embedded in the VBI via a high speed connection to the central game server is utilized. Utilizing some of the procedures outlined above, the propagation delays in the receipt of the cellular transmissions are also monitored and the game server adjusts the data files containing the "lock outs" to accommodate the systemic delay in the delivery of the game data on the cellular networks.

Another methodology, with the cooperation of the producers of game shows, precise audio or video events in the telecast could either be added to the video, such as a visible count down, or existing events in the telecast identified by the producers as synchronization points which the competitors could utilize as start points for the previously downloaded data files at the press of an appropriate button on their cellular phone. This would trigger the launch of a program previously downloaded to the phone's RAM. Then, time synchronization would be launched.

One more methodology uses an audio signal, possibly sub-audible to humans, which is inserted into the taped

audio track recognizable by the audio receiver in a cellular phone which would be utilized to start and/or continually keep the pre-produced data files resident on the cellular phone in synchronization with the telecast.

FIG. **3** illustrates a flowchart of a process of handling latency issues for taped programs. In the step **300**, pre-produced game data files are stored in servers; preferably, game production servers. The game data files include information required to participate in a game such as questions and answers for a trivia game like Jeopardy™. In the step **302**, start times are determined for each discrete telecast of a show. The start times are determined as described above, such as with the cooperation of a game provider employee, utilizing an audio/video recognition system, using a visible count down or a recognizable signal which is able to be recognized by a cellular phone. Other ways of determining start times are possible as well. In the step **304**, the game data files are transmitted at appropriate times based on the start times for each separate market. Furthermore, if additional delays are recognized, such as those delays described above, that is able to be accounted for.

FIG. **4** illustrates a graphical representation of an embodiment of the present invention. A server **400** contains applications **402** and a storage mechanism **404**. The applications **402** include an application to generate and modify game control data. The game control data is eventually transferred to users' cellular phones. If necessary the game control data is synchronized and time-stamped for each group, so that, as described previously, there are no unfair advantages for the competitors. A location application stored on the server **400** is able to determine which cellular phones are logged into the server **400** and what their location is. A grouping application is able to separate information such as scoring data and game control data into different groups. The grouping application also separates the cellular phones into groups or cohorts as described above. The storage mechanism **404** is utilized for storing the applications **402** in addition to selections and results. The storage mechanism **404** preferably includes a database for organizing the data including the selections, results, standings and groups amongst other data needed for executing the competitions. The server **400** is part of a network **406**. A device **408** couples to the server **400** through the network **406**. In some embodiments the network **406** includes the Internet. In some embodiments, the network **406** includes a cellular network. Also, in some embodiments, the network **406** includes both the Internet and a cellular network. The device **408** is preferably a cellular phone. In other embodiments a PDA, a computer, a laptop or any other device capable of communicating with the server **400** is possible. The device **408** stores a variety of applications **410**. A game application is stored on the device **408**. In some embodiments, software to identify the physical location of the device **408** is stored on the device **408**. The device **408** also receives the game control data which ensures no competitors have an unfair advantage using the methodologies described above. Furthermore, the device **408** receives game data which is used to play the games. An example of game data includes Jeopardy™ multiple choice answers. Additional applications are able to be included on the server **400** and on the device **408**, as necessary, for smooth operation of the games. Although some of the applications are described separately above, in some embodiments, the applications are included in one large application.

FIG. **5** illustrates a graphical representation of a network of devices of the present invention. A server **400** is coupled to many devices through a network **406**. The devices are grouped into groups or cohorts as described above. For example, Group 1 of devices **500** includes a set of devices that receive a television signal through cable with a delay time of x. Group 2 of devices **502** includes a set of devices that receive a television signal through satellite with a delay time of y. Group 3 of devices **504** includes a set of devices that receive a television signal over the air with a delay time of z. Then, based on the delay times of each group, steps need to be taken to ensure these delays do not affect the ability of users to play a game of skill which corresponds to a live event shown on television. As described above, a lockout signal is sent at the appropriate time depending on the delay, or a lockout signal is sent, but included with the lockout signal is information for the lockout not to be implemented until the delay is accounted for. This ensures that users with different delays based on their television signal reception path do not receive advantages or disadvantages. Furthermore, in addition to the delays being related to the type of signal reception path such as cable versus satellite, the delays could also be related to other aspects of the signal reception path such as the location of the receiving television or the type of equipment that one television company uses versus another.

To utilize the present invention, for the most part, a participant in a game of skill playing on his/her mobile device does not have to perform any different actions when playing a standard game of skill without the present invention. The user simply plays as usual except that with the present invention, users with faster or slower connections do not receive any advantages or disadvantages. In embodiments which require user input, the user performs an action, such as recognizing an event to synchronize the game with a live or taped event. For game producers, implementing the present invention is able to be automated or performed manually. Automation includes technology to automatically determine the start of an event such as automatically detecting the start of a football game. Manual implementation requires a person to watch an event and respond to that event such as watching a football game and noting when the first play occurs in order to synchronize the "lock out" signal appropriately.

In operation, the present invention is able to synchronize separate games of skill which have different latencies based on television signal reception differences, random delays and/or other delays. For live events where all of the participants are watching the event on television and participating in a game of skill corresponding to that live event, delays related to the television signal reception differences have to be handled. Television signal reception differences occur because some televisions receive the live event signal via satellite, while others have cable and still others have something else. The signals do not arrive at the participants at the same time. Therefore, to ensure fair competition, participants are separated into groups or cohorts based on delivery system type, location and other parameters that affect the timing of the signal. Then, using a mechanism described above, the delay for each group is determined. Based on that determined delay, the game of skill is able to be configured with the appropriate timing for a lock out signal, so that each participant has the same amount of time to select an answer and also sees the same amount of the live event as others before the lock out occurs.

For games of skill where there are both participants attending the event live and watching it on television which typically has a few seconds delay, the participants are separated into different competitive groups wherein the

attending participants are in one group and the television viewing participants are in another group.

For games of skill using tape recorded events like game shows, the important aspect is ensuring the game of skill corresponds with the televised recorded event. For example, if the game of skill were off by a few seconds, participants could receive multiple choice answers to the wrong questions. Therefore, the present invention ensures that the game of skill is synchronized with the taped televised event even when there are different latencies depending on how and where the television signal is being displayed.

Furthermore, although the methods of handling latency have been described above as handling a specific scenario such as delays in television signal reception, the methods are able to be used in conjunction with each other as well. For example, when participants are separated into attending and televised groups because some participants are actually attending an event while others watch it on television, for those watching it on television there will still be issues from location to location and based on the television signal reception, so the latency balancer which handles that aspect of latency is also able to be implemented.

The present invention has been described in terms of specific embodiments incorporating details to facilitate the understanding of principles of construction and operation of the invention. Such reference herein to specific embodiments and details thereof is not intended to limit the scope of the claims appended hereto. It will be readily apparent to one skilled in the art that other various modifications may be made in the embodiment chosen for illustration without departing from the spirit and scope of the invention as defined by the claims.

What is claimed is:

1. A server comprising:

a. a memory for storing an application for conducting one or more real-time games of skill or chance or other entertainment in connection with a sports event, the application configured for:

i. communicating with a plurality of devices grouped into a plurality of cohorts, wherein each cohort constitutes participants in one of the real-time games of skill or chance or other entertainment; and

ii. storing one or more files related to the one or more real-time games of skill or chance or other entertainment;

iii. simultaneously transmitting the one or more files to each of the devices within a cohort;

iv. sending one or more lockout signals at one or more appropriate times based on an amount of delay to prevent users from submitting one or more responses to the one or more real time games of skill or chance or other entertainment, wherein the at least one of the one or more lockout signals is based on information from an observer of the sports event; and

b. a processor for processing the application.

2. The server as claimed in claim **1** wherein the amount of delay for a cohort is based on an earliest signal reception by a member of the cohort.

3. The server as claimed in claim **2** wherein the signal reception is selected from the group consisting of an over the air network, a cable network, a satellite network, or one or more streamed signals.

4. The server as claimed in claim **1** wherein the server stores game control data and transfers the game control data to each device within the plurality of devices.

5. The server as claimed in claim **1** wherein the amount of delay is predetermined.

6. The server as claimed in claim **5** wherein the game control data includes delay information for equalizing the lockout signal.

7. The server as claimed in claim **1** wherein the amount of delay accounts for delays within a television signal reception path.

8. The server as claimed in claim **4** wherein the game control data imposes a delay for equalizing the lockout signal.

9. The server as claimed in claim **4** wherein the game control data is based on one or more real-time data feeds.

10. The server as claimed in claim **9** wherein the one or more real-time data feeds originate from a venue of the sports event.

11. The server as claimed in claim **1** wherein the game of skill or chance or other entertainment is synchronized with a broadcast of the sports event.

12. The server as claimed in claim **11** wherein the broadcast is delivered online.

13. The server as claimed in claim **11** wherein questions are displayed at precise times before, during and after the commercials or pauses in the broadcast sent to the plurality of devices in synchronization with the broadcast.

14. The server as claimed in claim **1** wherein an earliest receipt of the lockout signal by participants is utilized for equalizing locking out all participants.

15. The server as claimed in claim **1** wherein an earliest lockout signal required to prevent participants receiving an earliest broadcast signal on a connected device is utilized for equalizing locking out all participants receiving a later broadcast signal.

16. The server as claimed in claim **1** wherein input data received by a server from the plurality of devices is further for determining a shortest delay for participants and applying the one or more lockout signals to the participants based on the shortest delay within a cohort.

17. The server as claimed in claim **1** wherein the observer is physically present at the sports event.

18. The server as claimed in claim **1** wherein each of the cohorts receives the sports event delivered by similar transmission and reception systems.

19. The server as claimed in claim **1** wherein each of the cohorts is grouped based on a time zone in which the mobile device is located.

20. The server as claimed in claim **1** wherein a first cohort is watching a first sports event and a second cohort is watching a second sports event.

21. The server as claimed in claim **1** wherein a person observes the event at a physical venue and is in communication with one or more producers of the game of skill or chance or other entertainment.

22. The server as claimed in claim **1** wherein the appropriate time for the one or more lockout signals occurs immediately before competitors are able to see or hear a play unfold.

23. The server as claimed in claim **1** wherein the appropriate time for the one or more lockout signals occurs immediately before a scoring chance in an event.

24. The server as claimed in claim **1** wherein the appropriate time for the one or more lockout signals involves an in-progress play, not during a stoppage, and preventing submitting the response before a critical element of the in-progress play unfolds.

25. The server as claimed in claim **1** wherein the one or more lockout signals are able to apply for a limited amount of time and then removed permitting user input after the lockout signal is removed.

26. The server as claimed in claim **1** wherein the one or more lockout signals are able to apply for an action lasting a limited amount of time.

27. The server as claimed in claim **1** wherein the amount of delay is based on latency of video signals received by a producer producing the one or more real-time games of skill or chance or other entertainment.

28. The server as claimed in claim **1** wherein the amount of delay is measured.

29. A server comprising:

a. a memory for storing an application, the application configured for:

i. communicating with a plurality of devices grouped into a set of cohorts, wherein each cohort constitutes participants in one or more real-time games of skill or chance or other entertainment;

ii. storing one or more files related to the one or more real-time games of skill or chance or other entertainment;

iii. simultaneously transmitting the one or more files to each of the devices within a cohort; and

iv. sending one or more lockout signals at one or more appropriate times based on an amount of delay to prevent users from submitting a response to the real-time game of skill or chance or other entertainment, wherein a first cohort of the set of cohorts is watching a first televised sports event, and a second cohort of the set of cohorts is watching a second televised sports event, wherein the at least one of the one or more lockout signals is based on information from an observer of the sports event; and

b. a processor for processing the application.

30. The server as claimed in claim **29** wherein the amount of delay is measured.

31. The server as claimed in claim **29** wherein the server stores game control data and transfers the game control data to each device within the plurality of devices.

32. The server as claimed in claim **29** wherein the amount of delay is predetermined.

33. The server as claimed in claim **31** wherein the game control data includes delay information for equalizing the lockout signal.

34. The server as claimed in claim **29** wherein the amount of delay accounts for delays within a television signal reception path.

35. The server as claimed in claim **31** wherein the game control data imposes a delay for equalizing the lockout signal.

36. The server as claimed in claim **31** wherein the game control data is based on one or more real-time data feeds.

37. The server as claimed in claim **36** wherein the one or more real-time data feeds originate from a venue of the sports event.

38. The server as claimed in claim **29** wherein the observer is physically present at the sports event.

39. The server as claimed in claim **29** wherein a person observes the event at a physical venue and is in communication with one or more producers of the game of skill or chance or other entertainment.

40. The server as claimed in claim **29** wherein the appropriate time for the one or more lockout signals occurs immediately before competitors are able to see or hear a play unfold.

41. The server as claimed in claim **29** wherein the appropriate time for the one or more lockout signals occurs immediately before a scoring chance in an event.

42. The server as claimed in claim **29** wherein the appropriate time for the one or more lockout signals involves an in-progress play, not during a stoppage, and preventing submitting the response before a critical element of the in-progress play unfolds.

43. The server as claimed in claim **29** wherein the one or more lockout signals are able to apply for a limited amount of time and then removed permitting user input after the lockout signal is removed.

44. The server as claimed in claim **29** wherein the one or more lockout signals are able to apply for an action lasting a limited amount of time.

* * * * *

Exhibit 7

US011918880B2

(12) **United States Patent**
Lockton

(10) **Patent No.: US 11,918,880 B2**
(45) **Date of Patent: *Mar. 5, 2024**

(54) **METHOD OF AND SYSTEM FOR CONDUCTING MULTIPLE CONTESTS OF SKILL WITH A SINGLE PERFORMANCE**

(71) Applicant: **Winview, Inc.**, Redwood City, CA (US)

(72) Inventor: **David B. Lockton**, Redwood City, CA (US)

(73) Assignee: **Winview IP Holdings, LLC**, Charlotte, NC (US)

(*) Notice: Subject to any disclaimer, the term of this patent is extended or adjusted under 35 U.S.C. 154(b) by 0 days.

This patent is subject to a terminal disclaimer.

(21) Appl. No.: **17/688,412**

(22) Filed: **Mar. 7, 2022**

(65) **Prior Publication Data**

US 2022/0249935 A1 Aug. 11, 2022

Related U.S. Application Data

(63) Continuation of application No. 16/942,553, filed on Jul. 29, 2020, now Pat. No. 11,266,896, which is a (Continued)

(51) **Int. Cl.**
A63B 71/06 (2006.01)
A63F 13/31 (2014.01)
(Continued)

(52) **U.S. Cl.**
CPC ***A63B 71/06*** (2013.01); ***A63F 13/31*** (2014.09); ***A63F 13/35*** (2014.09); ***A63F 13/795*** (2014.09);
(Continued)

(58) **Field of Classification Search**
CPC A63B 71/06; A63F 13/31; A63F 13/35; A63F 13/795; A63F 13/80; G07F 17/32;
(Continued)

(56) **References Cited**

U.S. PATENT DOCUMENTS

2,010,516 A 8/1935 Hoffmann
2,051,615 A 8/1936 Miles
(Continued)

FOREIGN PATENT DOCUMENTS

CA 2252074 11/1997
CA 2252021 11/1998
(Continued)

OTHER PUBLICATIONS

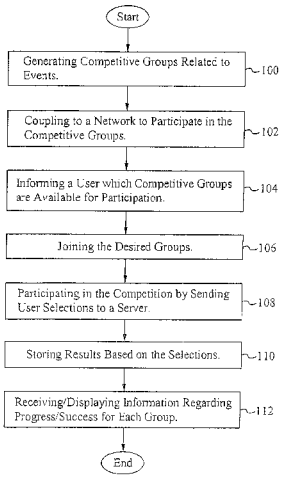
Pinnacle, "The basics of reverse line movement," Jan. 19, 2018, Retrieved on Jan. 22, 2020 , http://www.pinnacle.com/en/betting-articles educational/basics-of-reverse-line-movement/QAH26XGGQQS7M3GD.
(Continued)

Primary Examiner — Ronald Laneau
(74) *Attorney, Agent, or Firm* — Haverstock & Owens, A Law Corporation

(57) **ABSTRACT**

A method of and system for conducting multiple competitions of skill for a single performance are described herein. User generated competition groups and system generated competition groups allow users to participate in multiple competitions at once based on answering the same questions or making the same selections related to a single event. The users are informed of each competition either via email, text message or when logging into the network via a website. The users select which competitions groups to join. After joining the desired groups, the users then make their selections related to the event which are transmitted to the network where results are tabulated and transmitted back to the users. The results are separated based on each competition group, so that users can continually know where they stand in each separate competition. With multiple competition groups, users are able to have varying success from the same performance in multiple competitions.

49 Claims, 3 Drawing Sheets



Related U.S. Application Data

continuation of application No. 16/517,330, filed on Jul. 19, 2019, now Pat. No. 10,758,809, which is a continuation of application No. 15/956,619, filed on Apr. 18, 2018, now Pat. No. 10,410,474, which is a continuation of application No. 15/297,040, filed on Oct. 18, 2016, now Pat. No. 9,978,217, which is a continuation of application No. 14/956,217, filed on Dec. 1, 2015, now Pat. No. 9,501,904, which is a continuation of application No. 13/859,554, filed on Apr. 9, 2013, now Pat. No. 9,233,293, which is a continuation of application No. 13/246,464, filed on Sep. 27, 2011, now Pat. No. 9,056,251, which is a continuation-in-part of application No. 13/215,052, filed on Aug. 22, 2011, now Pat. No. 8,622,798, which is a continuation of application No. 11/652,240, filed on Jan. 10, 2007, now Pat. No. 8,002,618.

(60) Provisional application No. 60/757,960, filed on Jan. 10, 2006.

(51) **Int. Cl.**

A63F 13/35	(2014.01)
A63F 13/795	(2014.01)
A63F 13/80	(2014.01)
G07F 17/32	(2006.01)

(52) **U.S. Cl.**

CPC ***A63F 13/80*** (2014.09); ***G07F 17/32*** (2013.01); ***G07F 17/3227*** (2013.01); ***G07F 17/3241*** (2013.01); ***G07F 17/3255*** (2013.01); ***G07F 17/3276*** (2013.01); ***G07F 17/3288*** (2013.01); ***G07F 17/3293*** (2013.01); ***G07F 17/3295*** (2013.01)

(58) **Field of Classification Search**

CPC G07F 17/3227; G07F 17/3241; G07F 17/3255; G07F 17/3276; G07F 17/3288; G07F 17/3293; G07F 17/3295

See application file for complete search history.

(56) **References Cited**

U.S. PATENT DOCUMENTS

2,193,638	A	3/1940	Morton
2,274,933	A	3/1942	Peck
2,831,105	A	4/1958	Parker
3,550,944	A	12/1970	Chamberlin
3,562,650	A	2/1971	Gossard et al.
3,689,071	A	9/1972	Kucera
4,141,548	A	2/1979	Everton
4,270,755	A	6/1981	Willhide et al.
4,386,377	A	5/1983	Hunter, Jr.
4,496,148	A	1/1985	Morstain et al.
4,521,803	A	6/1985	Glittinger
4,592,546	A	6/1986	Fascenda et al.
4,816,904	A	3/1989	McKenna et al.
4,918,603	A	4/1990	Hughes et al.
4,930,010	A	5/1990	MacDonald
5,013,038	A	5/1991	Luvenberg
5,018,736	A	5/1991	Pearson et al.
5,035,422	A	7/1991	Berman
5,073,931	A	12/1991	Audebert et al.
5,083,271	A	1/1992	Thatcher et al.
5,083,800	A	1/1992	Lockton
5,119,295	A	6/1992	Kapur
5,120,076	A	6/1992	Luxenberg et al.
5,213,337	A	5/1993	Sherman
5,227,874	A	7/1993	Von Kohorn
5,256,863	A	10/1993	Ferguson
5,263,723	A	11/1993	Pearson et al.
5,283,734	A	2/1994	Von Kohorn
5,327,485	A	7/1994	Leaden
5,343,236	A	8/1994	Koppe et al.
5,343,239	A	8/1994	Lappington et al.
5,417,424	A	5/1995	Snowden
5,462,275	A	10/1995	Lowe et al.
5,479,492	A	12/1995	Hofstee et al.
5,488,659	A	1/1996	Millani
5,519,433	A	5/1996	Lappington
5,530,483	A	6/1996	Cooper
5,553,120	A	9/1996	Katz
5,566,291	A	10/1996	Boulton et al.
5,585,975	A	12/1996	Bliss
5,586,257	A	12/1996	Perlman
5,589,765	A	12/1996	Ohmart et al.
5,594,938	A	1/1997	Engel
5,618,232	A	4/1997	Martin
5,628,684	A	5/1997	Jean-Etienne
5,636,920	A	6/1997	Shur et al.
5,638,113	A	6/1997	Lappington
5,643,088	A	7/1997	Vaughn et al.
5,663,757	A	9/1997	Morales
5,711,715	A	1/1998	Ringo
5,759,101	A	6/1998	Kohorn
5,761,606	A	6/1998	Wolzien
5,762,552	A	6/1998	Voung et al.
5,764,275	A	6/1998	Lappington et al.
5,794,210	A	8/1998	Goldhaber et al.
5,805,230	A	9/1998	Staron
5,813,913	A	9/1998	Berner et al.
5,818,438	A	10/1998	Howe et al.
5,828,843	A	10/1998	Grimm
5,838,774	A	11/1998	Weiser, Jr.
5,838,909	A	11/1998	Roy
5,846,132	A	12/1998	Junkin
5,848,397	A	12/1998	Marsh et al.
5,860,862	A	1/1999	Junkin
5,882,260	A	3/1999	Marks
5,894,556	A	4/1999	Grimm
5,916,024	A	6/1999	Von Kohorn
5,870,683	A	9/1999	Wells et al.
5,970,143	A	10/1999	Schneier et al.
5,971,854	A	10/1999	Pearson et al.
5,987,440	A	11/1999	O'Neil et al.
6,009,458	A	12/1999	Hawkins et al.
6,015,344	A	1/2000	Kelly et al.
6,016,337	A	1/2000	Pykalisto
6,038,599	A	3/2000	Black
6,042,477	A	3/2000	Addink
6,064,449	A	5/2000	White
6,104,815	A	8/2000	Alcorn et al.
6,110,041	A	8/2000	Walker et al.
6,117,013	A	9/2000	Elba
6,126,543	A	10/2000	Friedman
6,128,660	A	10/2000	Grimm
6,135,881	A	10/2000	Abbott et al.
6,154,131	A	11/2000	Jones, II
6,174,237	B1	1/2001	Stephenson
6,182,084	B1	1/2001	Cockrell et al.
6,193,610	B1	2/2001	Junkin
6,222,642	B1	4/2001	Farrell et al.
6,233,736	B1	5/2001	Wolzien
6,251,017	B1	6/2001	Leason et al.
6,264,650	B1	7/2001	Goldberg
6,267,670	B1	7/2001	Walker
6,287,199	B1	9/2001	McKeown et al.
6,293,868	B1	9/2001	Bernard
6,312,336	B1	11/2001	Handelman et al.
6,343,320	B1	1/2002	Fairchild
6,345,297	B1	2/2002	Grimm
6,371,855	B1	4/2002	Gavriloff
6,373,462	B1	4/2002	Pan
6,411,969	B1	6/2002	Tam
6,416,414	B1	7/2002	Stadelmann
6,418,298	B1	7/2002	Sonnenfeld
6,425,828	B2	7/2002	Walker et al.
6,434,398	B1	8/2002	Inselberg
6,446,262	B1	9/2002	Malaure et al.
6,470,180	B1	10/2002	Kotzin et al.
6,475,090	B2	11/2002	Gregory

(56) **References Cited**

U.S. PATENT DOCUMENTS

6,524,189 B1 2/2003 Rautila
6,527,641 B1 3/2003 Sinclair et al.
6,530,082 B1 3/2003 Del Sesto et al.
6,536,037 B1 3/2003 Guheen et al.
6,537,150 B1 3/2003 Luciano
6,578,068 B1 6/2003 Bowma-Amuah
6,594,098 B1 7/2003 Sutardja
6,604,997 B2 7/2003 Saidakovsky et al.
6,610,953 B1 8/2003 Tao et al.
6,611,755 B1 8/2003 Coffee
6,648,760 B1 11/2003 Nicastro
6,659,860 B1 12/2003 Yamamoto et al.
6,659,861 B1 12/2003 Faris
6,659,872 B1 12/2003 Kaufman et al.
6,690,661 B1 2/2004 Agarwal et al.
6,697,869 B1 2/2004 Mallart
6,718,350 B1 4/2004 Karbowski
6,752,396 B2 6/2004 Smith
6,758,754 B1 7/2004 Lavanchy et al.
6,758,755 B2 7/2004 Kelly et al.
6,760,595 B2 7/2004 Insellberg
6,763,377 B1 7/2004 Balknap et al.
6,766,524 B1 7/2004 Matheny et al.
6,774,926 B1 8/2004 Ellis et al.
6,785,561 B1 8/2004 Kim
6,801,380 B1 10/2004 Saturdja
6,806,889 B1 10/2004 Malaure et al.
6,807,675 B1 10/2004 Millard et al.
6,811,482 B2 11/2004 Letovsky
6,811,487 B2 11/2004 Sengoku
6,816,628 B1 11/2004 Sarachik et al.
6,817,947 B2 11/2004 Tanskanen
6,824,469 B2 11/2004 Allibhoy et al.
6,837,789 B2 1/2005 Garahi et al.
6,837,791 B1 1/2005 McNutt et al.
6,840,861 B2 1/2005 Jordan et al.
6,845,389 B1 1/2005 Sen
6,846,239 B2 1/2005 Washio
6,857,122 B1 2/2005 Takeda et al.
6,863,610 B2 3/2005 Vancraeynest
6,870,720 B2 3/2005 Iwata et al.
6,871,226 B1 3/2005 Ensley et al.
6,873,610 B1 3/2005 Noever
6,884,166 B2 4/2005 Leen et al.
6,884,172 B1 4/2005 Lloyd et al.
6,887,159 B2 5/2005 Leen et al.
6,888,929 B1 5/2005 Saylor
6,893,347 B1 5/2005 Zilliacus et al.
6,898,762 B2 5/2005 Ellis et al.
6,899,628 B2 5/2005 Leen et al.
6,903,681 B2 6/2005 Faris
6,908,389 B1 6/2005 Puskala
6,942,574 B1 9/2005 LeMay et al.
6,944,228 B1 9/2005 Dakss et al.
6,960,088 B1 11/2005 Long
6,978,053 B1 12/2005 Sarachik et al.
7,001,279 B1 2/2006 Barber et al.
7,029,394 B2 4/2006 Leen et al.
7,035,626 B1 4/2006 Luciano, Jr.
7,035,653 B2 4/2006 Simon et al.
7,058,592 B1 6/2006 Heckerman et al.
7,076,434 B1 7/2006 Newman et al.
7,085,552 B2 8/2006 Buckley
7,116,310 B1 10/2006 Evans et al.
7,117,517 B1 10/2006 Milazzo et al.
7,120,924 B1 10/2006 Katcher et al.
7,124,410 B2 10/2006 Berg
7,125,336 B2 10/2006 Anttila et al.
7,136,871 B2 11/2006 Ozer et al.
7,144,011 B2 12/2006 Asher et al.
7,169,050 B1 1/2007 Tyler
7,185,355 B1 2/2007 Ellis
7,187,658 B2 3/2007 Koyanagi
7,191,447 B1 3/2007 Ellis et al.
7,192,352 B2 3/2007 Walker et al.
7,194,758 B1 3/2007 Waki et al.
7,228,349 B2 6/2007 Barone, Jr. et al.
7,231,630 B2 6/2007 Acott et al.
7,233,922 B2 6/2007 Asher et al.
7,240,093 B1 7/2007 Danieli et al.
7,244,181 B2 7/2007 Wang et al.
7,249,367 B2 7/2007 Bove, Jr. et al.
7,254,605 B1 8/2007 Strum
7,260,782 B2 8/2007 Wallace et al.
RE39,818 E 9/2007 Slifer
7,283,830 B2 10/2007 Buckley
7,288,027 B2 10/2007 Overton
7,341,517 B2 3/2008 Asher et al.
7,343,617 B1 3/2008 Kartcher et al.
7,347,781 B2 3/2008 Schultz
7,351,149 B1 4/2008 Simon et al.
7,367,042 B1 4/2008 Dakss et al.
7,379,705 B1 5/2008 Rados et al.
7,389,144 B1 6/2008 Osorio
7,430,718 B2 9/2008 Gariepy-Viles
7,452,273 B2 11/2008 Amaitis et al.
7,460,037 B2 12/2008 Cattone et al.
7,461,067 B2 12/2008 Dewing et al.
7,502,610 B2 3/2009 Maher
7,510,474 B2 3/2009 Carter, Sr.
7,517,282 B1 4/2009 Pryor
7,534,169 B2 5/2009 Amaitis et al.
7,543,052 B1 6/2009 Cesa Klein
7,562,134 B1 7/2009 Fingerhut et al.
7,602,808 B2 10/2009 Ullmann
7,610,330 B1 10/2009 Quinn
7,614,944 B1 11/2009 Hughes et al.
7,630,986 B1 12/2009 Herz et al.
7,693,781 B2 4/2010 Asher et al.
7,699,707 B2 4/2010 Bahou
7,702,723 B2 4/2010 Dyl
7,711,628 B2 5/2010 Davie et al.
7,729,286 B2 6/2010 Mishra
7,753,772 B1 7/2010 Walker
7,753,789 B2 7/2010 Walker et al.
7,780,528 B2 8/2010 Hirayama
7,828,661 B1 11/2010 Fish
7,835,961 B2 11/2010 Davie et al.
7,860,993 B2 12/2010 Chintala
7,886,003 B2 2/2011 Newman
7,907,211 B2 3/2011 Oostveen et al.
7,907,598 B2 3/2011 Anisimov
7,909,332 B2 3/2011 Root
7,925,756 B1 4/2011 Riddle
7,926,810 B2 4/2011 Fisher et al.
7,937,318 B2 5/2011 Davie et al.
7,941,482 B2 5/2011 Bates
7,941,804 B1 5/2011 Herington
7,951,002 B1 5/2011 Brosnan
7,976,389 B2 7/2011 Cannon et al.
8,002,618 B1 8/2011 Lockton
8,006,314 B2 8/2011 Wold
8,025,565 B2 9/2011 Leen et al.
8,028,315 B1 9/2011 Barber
8,082,150 B2 12/2011 Wold
8,086,445 B2 12/2011 Wold et al.
8,086,510 B2 12/2011 Amaitis et al.
8,092,303 B2 1/2012 Amaitis et al.
8,092,306 B2 1/2012 Root
8,105,141 B2 1/2012 Leen et al.
8,107,674 B2 1/2012 Davis et al.
8,109,827 B2 2/2012 Cahill et al.
8,128,474 B2 3/2012 Amaitis et al.
8,147,313 B2 4/2012 Amaitis et al.
8,147,373 B2 4/2012 Amaitis et al.
8,149,530 B1 4/2012 Lockton et al.
8,155,637 B2 4/2012 Fujisawa
8,162,759 B2 4/2012 Yamaguchi
8,176,518 B1 5/2012 Junkin et al.
8,186,682 B2 5/2012 Amaitis et al.
8,204,808 B2 6/2012 Amaitis et al.
8,219,617 B2 7/2012 Ashida
8,240,669 B2 8/2012 Asher et al.
8,246,048 B2 8/2012 Asher et al.

(56) **References Cited**

U.S. PATENT DOCUMENTS

8,267,403 B2 9/2012 Fisher et al.
8,342,924 B2 1/2013 Leen et al.
8,342,942 B2 1/2013 Amaitis et al.
8,353,763 B2 1/2013 Amaitis et al.
8,376,855 B2 2/2013 Lockton et al.
8,396,001 B2 3/2013 Jung
8,397,257 B1 3/2013 Barber
8,465,021 B2 6/2013 Asher et al.
8,473,393 B2 6/2013 Davie et al.
8,474,819 B2 7/2013 Asher et al.
8,535,138 B2 9/2013 Amaitis et al.
8,538,563 B1 9/2013 Barber
8,543,487 B2 9/2013 Asher et al.
8,555,313 B2 10/2013 Newman
8,556,691 B2 10/2013 Leen et al.
8,585,490 B2 11/2013 Amaitis et al.
8,597,117 B2 12/2013 Bruce
8,622,798 B2 1/2014 Lockton et al.
8,632,392 B2 1/2014 Shore et al.
8,634,943 B2 1/2014 Root
8,638,517 B2 1/2014 Lockton et al.
8,641,511 B2 2/2014 Ginsberg et al.
8,659,848 B2 2/2014 Lockton et al.
8,672,751 B2 3/2014 Leen et al.
8,699,168 B2 4/2014 Lockton et al.
8,705,195 B2 4/2014 Lockton
8,708,789 B2 4/2014 Asher et al.
8,717,701 B2 5/2014 Lockton et al.
8,727,352 B2 5/2014 Amaitis et al.
8,734,227 B2 5/2014 Leen et al.
8,737,004 B2 5/2014 Lockton et al.
8,738,694 B2 5/2014 Huske et al.
8,771,058 B2 7/2014 Alderucci et al.
8,780,482 B2 7/2014 Lockton et al.
8,805,732 B2 8/2014 Davie et al.
8,813,112 B1 8/2014 Cibula et al.
8,814,664 B2 8/2014 Amaitis et al.
8,817,408 B2 8/2014 Lockton et al.
8,837,072 B2 9/2014 Lockton et al.
8,849,225 B1 9/2014 Choti
8,849,255 B2 9/2014 Choti
8,858,313 B1 10/2014 Selfors
8,870,639 B2 10/2014 Lockton et al.
8,935,715 B2 1/2015 Cibula et al.
9,056,251 B2 * 6/2015 Lockton G07F 17/3276
9,067,143 B2 * 6/2015 Lockton G07F 17/3295
9,069,651 B2 6/2015 Barber
9,076,303 B1 7/2015 Park
9,098,883 B2 8/2015 Asher et al.
9,111,417 B2 8/2015 Leen et al.
9,205,339 B2 12/2015 Cibula et al.
9,233,293 B2 1/2016 Lockton
9,258,601 B2 2/2016 Lockton et al.
9,270,789 B2 2/2016 Huske et al.
9,289,692 B2 3/2016 Barber
9,306,952 B2 4/2016 Burman et al.
9,314,686 B2 4/2016 Lockton
9,314,701 B2 4/2016 Lockton et al.
9,355,518 B2 5/2016 Amaitis et al.
9,406,189 B2 8/2016 Scott et al.
9,430,901 B2 8/2016 Amaitis et al.
9,457,272 B2 10/2016 Lockton et al.
9,498,724 B2 11/2016 Lockton et al.
9,501,904 B2 11/2016 Lockton
9,504,922 B2 11/2016 Lockton et al.
9,511,287 B2 12/2016 Lockton et al.
9,526,991 B2 12/2016 Lockton et al.
9,536,396 B2 1/2017 Amaitis et al.
9,556,991 B2 1/2017 Furuya
9,604,140 B2 3/2017 Lockton et al.
9,652,937 B2 5/2017 Lockton
9,662,576 B2 5/2017 Lockton et al.
9,662,577 B2 5/2017 Lockton et al.
9,672,692 B2 6/2017 Lockton
9,687,738 B2 6/2017 Lockton et al.
9,687,739 B2 6/2017 Lockton et al.
9,707,482 B2 7/2017 Lockton et al.
9,716,918 B1 7/2017 Lockton et al.
9,724,603 B2 8/2017 Lockton et al.
9,744,453 B2 8/2017 Lockton et al.
9,805,549 B2 10/2017 Asher et al.
9,821,233 B2 11/2017 Lockton et al.
9,878,243 B2 1/2018 Lockton et al.
9,881,337 B2 1/2018 Jaycobs et al.
9,901,820 B2 2/2018 Lockton et al.
9,908,053 B2 3/2018 Lockton et al.
9,919,210 B2 3/2018 Lockton
9,919,211 B2 3/2018 Lockton et al.
9,919,221 B2 3/2018 Lockton et al.
9,978,217 B2 5/2018 Lockton
9,993,730 B2 6/2018 Lockton et al.
9,999,834 B2 6/2018 Lockton et al.
10,052,557 B2 8/2018 Lockton et al.
10,089,815 B2 10/2018 Asher et al.
10,096,210 B2 10/2018 Amaitis et al.
10,137,369 B2 11/2018 Lockton et al.
10,150,031 B2 12/2018 Lockton et al.
10,165,339 B2 12/2018 Huske et al.
10,186,116 B2 1/2019 Lockton
10,195,526 B2 2/2019 Lockton et al.
10,226,698 B1 3/2019 Lockton et al.
10,226,705 B2 3/2019 Lockton et al.
10,232,270 B2 3/2019 Lockton et al.
10,248,290 B2 4/2019 Galfond
10,279,253 B2 5/2019 Lockton
10,360,767 B2 7/2019 Russell et al.
10,410,474 B2 9/2019 Lockton
10,438,451 B2 10/2019 Amaitis
10,569,175 B2 2/2020 Kosai et al.
10,593,157 B2 3/2020 Simons
10,653,955 B2 5/2020 Lockton
10,695,672 B2 6/2020 Lockton et al.
10,709,987 B2 7/2020 Lockton et al.
10,721,543 B2 7/2020 Huske et al.
10,825,294 B2 11/2020 Katz
10,937,279 B1 3/2021 Workman
10,981,070 B2 4/2021 Isgreen
11,077,366 B2 8/2021 Lockton
11,082,746 B2 8/2021 Lockton
11,083,965 B2 8/2021 Lockton
11,154,775 B2 10/2021 Lockton
11,179,632 B2 11/2021 Lockton
11,185,770 B2 11/2021 Lockton
2001/0004609 A1 6/2001 Walker et al.
2001/0005670 A1 6/2001 Lahtinen
2001/0013067 A1 8/2001 Koyanagi
2001/0013125 A1 8/2001 Kitsukawa et al.
2001/0020298 A1 9/2001 Rector, Jr. et al.
2001/0032333 A1 10/2001 Flickinger
2001/0036272 A1 11/2001 Hirayama
2001/0036853 A1 11/2001 Thomas
2001/0044339 A1 11/2001 Cordero
2001/0054019 A1 12/2001 de Fabrega
2002/0010789 A1 1/2002 Lord
2002/0018477 A1 2/2002 Katz
2002/0026321 A1 2/2002 Faris
2002/0029381 A1 3/2002 Inselberg
2002/0035609 A1 3/2002 Lessard
2002/0037766 A1 3/2002 Muniz
2002/0069265 A1 3/2002 Bountour
2002/0042293 A1 4/2002 Ubale et al.
2002/0046099 A1 4/2002 Frengut et al.
2002/0054088 A1 5/2002 Tanskanen et al.
2002/0055385 A1 5/2002 Otsu
2002/0056089 A1 5/2002 Houston
2002/0059094 A1 5/2002 Hosea et al.
2002/0059623 A1 5/2002 Rodriguez et al.
2002/0069076 A1 6/2002 Faris
2002/0076084 A1 6/2002 Tian
2002/0078176 A1 6/2002 Nomura et al.
2002/0083461 A1 6/2002 Hutcheson
2002/0091833 A1 7/2002 Grimm
2002/0094869 A1 7/2002 Harkham
2002/0095333 A1 7/2002 Jokinen et al.

(56) **References Cited**

U.S. PATENT DOCUMENTS

2002/0097983 A1 7/2002 Wallace et al.
2002/0099709 A1 7/2002 Wallace
2002/0100063 A1 7/2002 Herigstad et al.
2002/0103696 A1 8/2002 Huang et al.
2002/0105535 A1 8/2002 Wallace et al.
2002/0107073 A1 8/2002 Binney
2002/0108112 A1 8/2002 Wallace et al.
2002/0108125 A1 8/2002 Joao
2002/0108127 A1 8/2002 Lew et al.
2002/0112249 A1 8/2002 Hendricks et al.
2002/0115488 A1 8/2002 Berry et al.
2002/0119821 A1 8/2002 Sen
2002/0120930 A1 8/2002 Yona
2002/0124247 A1 9/2002 Houghton
2002/0132614 A1 9/2002 Vanlujit et al.
2002/0133817 A1 9/2002 Markel
2002/0133827 A1 9/2002 Newman et al.
2002/0142843 A1 10/2002 Roelofs
2002/0144273 A1 10/2002 Reto
2002/0147049 A1 10/2002 Carter, Sr.
2002/0157002 A1 10/2002 Messerges et al.
2002/0157005 A1 10/2002 Bunk
2002/0159576 A1 10/2002 Adams
2002/0162031 A1 10/2002 Levin et al.
2002/0162117 A1 10/2002 Pearson
2002/0165020 A1 11/2002 Koyama
2002/0165025 A1 11/2002 Kawahara
2002/0177483 A1 11/2002 Cannon
2002/0184624 A1 12/2002 Spencer
2002/0187825 A1 12/2002 Tracy
2002/0198050 A1 12/2002 Patchen
2003/0002638 A1 1/2003 Kaars
2003/0003997 A1 1/2003 Vuong et al.
2003/0013528 A1 1/2003 Allibhoy et al.
2003/0023547 A1 1/2003 France
2003/0040363 A1 2/2003 Sandberg
2003/0054885 A1 3/2003 Pinto et al.
2003/0060247 A1 3/2003 Goldberg et al.
2003/0066089 A1 4/2003 Anderson
2003/0069828 A1 4/2003 Blazey et al.
2003/0070174 A1 4/2003 Solomon
2003/0078924 A1 4/2003 Liechty et al.
2003/0086691 A1 5/2003 Yu
2003/0087652 A1 5/2003 Simon et al.
2003/0088648 A1 5/2003 Bellaton
2003/0088878 A1 5/2003 Rogers
2003/0114224 A1 6/2003 Anttila et al.
2003/0115152 A1 6/2003 Flaherty
2003/0125109 A1 7/2003 Green
2003/0134678 A1 7/2003 Tanaka
2003/0144017 A1 7/2003 Inselberg
2003/0154242 A1 8/2003 Hayes et al.
2003/0165241 A1 9/2003 Fransdonk
2003/0177167 A1 9/2003 Lafage et al.
2003/0177504 A1 9/2003 Paulo et al.
2003/0189668 A1 10/2003 Newman et al.
2003/0195023 A1 10/2003 Di Cesare
2003/0195807 A1 10/2003 Maggio
2003/0208579 A1 11/2003 Brady et al.
2003/0211856 A1 11/2003 Zilliacus
2003/0212691 A1 11/2003 Kuntala et al.
2003/0216185 A1 11/2003 Varley
2003/0216857 A1 11/2003 Feldman et al.
2003/0228866 A1 12/2003 Pezeshki
2003/0233425 A1 12/2003 Lyons et al.
2004/0005919 A1 1/2004 Walker et al.
2004/0014524 A1 1/2004 Pearlman
2004/0015442 A1 1/2004 Hmlinen
2004/0022366 A1 2/2004 Ferguson et al.
2004/0025190 A1 2/2004 McCalla
2004/0056897 A1 3/2004 Ueda
2004/0060063 A1 3/2004 Russ et al.
2004/0073915 A1 4/2004 Dureau
2004/0088729 A1 5/2004 Petrovic et al.
2004/0093302 A1 5/2004 Baker et al.
2004/0152454 A1 5/2004 Kauppinen
2004/0107138 A1 6/2004 Maggio
2004/0117831 A1 6/2004 Ellis et al.
2004/0117839 A1 6/2004 Watson et al.
2004/0128319 A1 7/2004 Davis et al.
2004/0139158 A1 7/2004 Datta
2004/0139482 A1 7/2004 Hale
2004/0148638 A1 7/2004 Weisman et al.
2004/0152517 A1 8/2004 Haedisty
2004/0152519 A1 8/2004 Wang
2004/0158855 A1 8/2004 Gu et al.
2004/0162124 A1 8/2004 Barton
2004/0166873 A1 8/2004 Simic
2004/0176162 A1 9/2004 Rothschild
2004/0178923 A1 9/2004 Kuang
2004/0183824 A1 9/2004 Benson
2004/0185881 A1 9/2004 Lee
2004/0190779 A1 9/2004 Sarachik et al.
2004/0198495 A1 10/2004 Cisneros et al.
2004/0201626 A1 10/2004 Lavoie
2004/0203667 A1 10/2004 Shroder
2004/0203898 A1 10/2004 Bodin et al.
2004/0210507 A1 10/2004 Asher et al.
2004/0215756 A1 10/2004 VanAntwerp
2004/0216161 A1 10/2004 Barone, Jr. et al.
2004/0216171 A1 10/2004 Barone, Jr. et al.
2004/0224750 A1 11/2004 Ai-Ziyoud
2004/0242321 A1 12/2004 Overton
2004/0266513 A1 12/2004 Odom
2005/0005303 A1 1/2005 Barone, Jr. et al.
2005/0021942 A1 1/2005 Diehl et al.
2005/0026699 A1 2/2005 Kinzer et al.
2005/0028208 A1 2/2005 Ellis
2005/0043094 A1 2/2005 Nguyen et al.
2005/0076371 A1 4/2005 Nakamura
2005/0077997 A1 4/2005 Landram
2005/0060219 A1 5/2005 Ditering et al.
2005/0097599 A1 5/2005 Potnick et al.
2005/0101309 A1 5/2005 Croome
2005/0113164 A1 5/2005 Buecheler et al.
2005/0003878 A1 6/2005 Updike
2005/0116416 A1 6/2005 Peterson
2005/0131984 A1 6/2005 Hofmann et al.
2005/0138668 A1 6/2005 Gray et al.
2005/0144102 A1 6/2005 Johnson
2005/0155083 A1 7/2005 Oh
2005/0177861 A1 8/2005 Ma et al.
2005/0210526 A1 9/2005 Levy et al.
2005/0216838 A1 9/2005 Graham
2005/0235043 A1 10/2005 Teodosiu et al.
2005/0239551 A1 10/2005 Griswold
2005/0255901 A1 11/2005 Kreutzer
2005/0256895 A1 11/2005 Dussault
2005/0266869 A1 12/2005 Jung
2005/0267969 A1 12/2005 Poikselka et al.
2005/0273804 A1 12/2005 Preisman
2005/0283800 A1 12/2005 Ellis et al.
2005/0288080 A1 12/2005 Lockton et al.
2005/0288101 A1 12/2005 Lockton et al.
2005/0288812 A1 12/2005 Cheng
2006/0020700 A1 1/2006 Qiu
2006/0025070 A1 2/2006 Kim et al.
2006/0046810 A1 3/2006 Tabata
2006/0047772 A1 3/2006 Crutcher
2006/0053390 A1 3/2006 Gariepy-Viles
2006/0058103 A1 3/2006 Danieli
2006/0059161 A1 3/2006 Millett et al.
2006/0063590 A1 3/2006 Abassi et al.
2006/0082068 A1 4/2006 Patchen
2006/0087585 A1 4/2006 Seo
2006/0089199 A1 4/2006 Jordan et al.
2006/0094409 A1 5/2006 Inselberg
2006/0101492 A1 5/2006 Lowcock
2006/0111168 A1 5/2006 Nguyen
2006/0135253 A1 6/2006 George et al.
2006/0148569 A1 7/2006 Beck
2006/0156371 A1 7/2006 Maetz et al.
2006/0160597 A1 7/2006 Wright
2006/0174307 A1 8/2006 Hwang et al.

(56) **References Cited**

U.S. PATENT DOCUMENTS

2006/0183547 A1 8/2006 McMonigle
2006/0183548 A1 8/2006 Morris et al.
2006/0190654 A1 8/2006 Joy
2006/0205483 A1* 9/2006 Meyer G06Q 20/06 463/25
2006/0205509 A1 9/2006 Hirota
2006/0205510 A1 9/2006 Lauper
2006/0217198 A1 9/2006 Johnson
2006/0236352 A1 10/2006 Scott, III
2006/0248553 A1 11/2006 Mikkelson et al.
2006/0248564 A1 11/2006 Zinevitch
2006/0256865 A1 11/2006 Westerman
2006/0256868 A1 11/2006 Westerman
2006/0269120 A1 11/2006 Mehmadi et al.
2006/0285586 A1 12/2006 Westerman
2007/0004516 A1 1/2007 Jordan et al.
2007/0013547 A1 1/2007 Boaz
2007/0019826 A1 1/2007 Horbach et al.
2007/0028272 A1 2/2007 Lockton
2007/0037623 A1 2/2007 Romik
2007/0054695 A1 3/2007 Huske et al.
2007/0078009 A1 4/2007 Lockton et al.
2007/0083920 A1 4/2007 Mizoguchi et al.
2007/0086465 A1 4/2007 Paila et al.
2007/0087832 A1 4/2007 Abbott
2007/0093296 A1 4/2007 Asher
2007/0106721 A1 5/2007 Schloter
2007/0107010 A1 5/2007 Jolna et al.
2007/0129144 A1 6/2007 Katz
2007/0147870 A1 7/2007 Nagashima et al.
2007/0162328 A1 7/2007 Reich
2007/0183744 A1 8/2007 Koizumi
2007/0197247 A1 8/2007 Inselberg
2007/0210908 A1 9/2007 Putterman et al.
2007/0219856 A1 9/2007 Ahmad-Taylor
2007/0222652 A1 9/2007 Cattone et al.
2007/0226062 A1 9/2007 Hughes et al.
2007/0238525 A1 10/2007 Suomela
2007/0243936 A1* 10/2007 Binenstock G06Q 10/10 463/42
2007/0244570 A1 10/2007 Speiser et al.
2007/0244585 A1 10/2007 Speiser et al.
2007/0244749 A1 10/2007 Speiser et al.
2007/0265089 A1 11/2007 Robarts
2007/0294410 A1 12/2007 Pandya
2008/0005037 A1 1/2008 Hammad
2008/0013927 A1 1/2008 Kelly et al.
2008/0051201 A1 2/2008 Lore
2008/0066129 A1 3/2008 Katcher et al.
2008/0076497 A1 3/2008 Kiskis et al.
2008/0104630 A1 5/2008 Bruce
2008/0146337 A1 6/2008 Halonen
2008/0169605 A1 7/2008 Shuster et al.
2008/0222672 A1 9/2008 Piesing
2008/0240681 A1 10/2008 Fukushima
2008/0248865 A1 10/2008 Tedesco
2008/0270288 A1 10/2008 Butterly et al.
2008/0288600 A1 11/2008 Clark
2008/0301741 A1 12/2008 Stern
2008/0315521 A1 12/2008 Reabe, Jr.
2009/0011781 A1 1/2009 Merrill et al.
2009/0094632 A1 4/2009 Newman et al.
2009/0103892 A1 4/2009 Hirayama
2009/0119151 A1 5/2009 de Heer
2009/0186676 A1 7/2009 Amaitis et al.
2009/0163271 A1 9/2009 George et al.
2009/0228351 A1 9/2009 Rijsenbrij
2009/0234674 A1 9/2009 Wurster
2009/0264188 A1 10/2009 Soukup
2009/0271512 A1 10/2009 Jorgensen
2009/0325716 A1 12/2009 Harari
2010/0099421 A1 4/2010 Patel et al.
2010/0099471 A1 4/2010 Feeney et al.
2010/0107194 A1 4/2010 McKissick et al.
2010/0120503 A1 5/2010 Hoffman et al.
2010/0137057 A1 6/2010 Fleming
2010/0203936 A1 8/2010 Levy
2010/0261533 A1 10/2010 Kryger
2010/0279764 A1 11/2010 Allen et al.
2010/0296511 A1 11/2010 Prodan
2011/0016224 A1 1/2011 Riley
2011/0053681 A1 3/2011 Goldman
2011/0065490 A1 3/2011 Lutnick
2011/0081958 A1 4/2011 Herman
2011/0116461 A1 5/2011 Holt
2011/0124397 A1 5/2011 Gingher
2011/0130197 A1 6/2011 Bythar et al.
2011/0227287 A1 9/2011 Reabe
2011/0269548 A1 11/2011 Barclay et al.
2011/0306428 A1 12/2011 Lockton et al.
2012/0058808 A1 3/2012 Lockton
2012/0115585 A1 5/2012 Goldman
2012/0157178 A1 6/2012 Lockton
2012/0264496 A1 10/2012 Behrman et al.
2012/0282995 A1 11/2012 Allen et al.
2012/0295686 A1 11/2012 Lockton
2013/0005453 A1 1/2013 Nguyen et al.
2013/0072271 A1 3/2013 Lockton et al.
2013/0079081 A1 3/2013 Lockton et al.
2013/0079092 A1 3/2013 Lockton et al.
2013/0079093 A1 3/2013 Lockton et al.
2013/0079135 A1 3/2013 Lockton et al.
2013/0079150 A1 3/2013 Lockton et al.
2013/0079151 A1 3/2013 Lockton et al.
2013/0196774 A1 8/2013 Lockton et al.
2013/0225285 A1 8/2013 Lockton
2013/0225299 A1 8/2013 Lockton
2014/0031134 A1 1/2014 Lockton et al.
2014/0100011 A1 4/2014 Gingher
2014/0106832 A1 4/2014 Lockton et al.
2014/0128139 A1 5/2014 Shuster et al.
2014/0155130 A1 6/2014 Lockton et al.
2014/0155134 A1 6/2014 Lockton
2014/0206446 A1 7/2014 Lockton et al.
2014/0237025 A1 8/2014 Huske et al.
2014/0248952 A1 9/2014 Cibula et al.
2014/0256432 A1 9/2014 Lockton et al.
2014/0279439 A1 9/2014 Brown
2014/0287832 A1 9/2014 Lockton et al.
2014/0309001 A1 10/2014 Root
2014/0335961 A1 11/2014 Lockton et al.
2014/0335962 A1 11/2014 Lockton et al.
2014/0378212 A1 12/2014 Sims
2015/0011310 A1 1/2015 Lockton et al.
2015/0024814 A1 1/2015 Root
2015/0067732 A1 3/2015 Howe et al.
2015/0148130 A1 5/2015 Cibula et al.
2015/0238839 A1 8/2015 Lockton
2015/0238873 A1 8/2015 Arnone et al.
2015/0258452 A1 9/2015 Lockton et al.
2015/0356831 A1 12/2015 Osibodu
2016/0023116 A1 1/2016 Wire
2016/0045824 A1 2/2016 Lockton et al.
2016/0049049 A1 2/2016 Lockton
2016/0054872 A1 2/2016 Cibula et al.
2016/0082357 A1 3/2016 Lockton
2016/0121208 A1 5/2016 Lockton et al.
2016/0134947 A1 5/2016 Huske et al.
2016/0217653 A1 7/2016 Meyer
2016/0220908 A1 8/2016 Isgreen
2016/0271501 A1 9/2016 Balsbaugh
2016/0361647 A1 12/2016 Lockton et al.
2016/0375362 A1 12/2016 Lockton et al.
2017/0036110 A1 2/2017 Lockton et al.
2017/0036117 A1 2/2017 Lockton et al.
2017/0043259 A1 2/2017 Lockton et al.
2017/0053498 A1 2/2017 Lockton
2017/0065891 A1 3/2017 Lockton et al.
2017/0098348 A1 4/2017 Odom
2017/0103615 A1 4/2017 Theodospoulos
2017/0128840 A1 5/2017 Croci
2017/0221314 A1 8/2017 Lockton
2017/0225071 A1 8/2017 Lockton et al.
2017/0225072 A1 8/2017 Lockton et al.

(56) **References Cited**

U.S. PATENT DOCUMENTS

2017/0232340	A1	8/2017	Lockton
2017/0243438	A1	8/2017	Merati
2017/0249801	A1	8/2017	Malek
2017/0252649	A1	9/2017	Lockton et al.
2017/0259173	A1	9/2017	Lockton et al.
2017/0264961	A1	9/2017	Lockton
2017/0282067	A1	10/2017	Lockton et al.
2017/0296916	A1	10/2017	Lockton et al.
2017/0304726	A1	10/2017	Lockton et al.
2017/0345260	A1	11/2017	Strause
2018/0001213	A1	1/2018	Tsang
2018/0025586	A1	1/2018	Lockton
2018/0071637	A1	3/2018	Baazov
2018/0104582	A1	4/2018	Lockton et al.
2018/0104596	A1	4/2018	Lockton et al.
2018/0117464	A1	5/2018	Lockton et al.
2018/0140955	A1	5/2018	Lockton et al.
2018/0154255	A1	6/2018	Lockton
2018/0169523	A1	6/2018	Lockton et al.
2018/0190077	A1	7/2018	Hall
2018/0236359	A1	8/2018	Lockton et al.
2018/0243652	A1	8/2018	Lockton et al.
2018/0264360	A1	9/2018	Lockton et al.
2018/0300988	A1	10/2018	Lockton
2018/0318710	A1	11/2018	Lockton et al.
2019/0054375	A1	2/2019	Lockton et al.
2019/0060750	A1	2/2019	Lockton et al.
2019/0143225	A1	5/2019	Baazov
2019/0295382	A1	9/2019	Huke
2019/0304259	A1	10/2019	Joao
2020/0111325	A1	4/2020	Lockton
2021/0043036	A1	2/2021	Katz
2021/0099759	A1	4/2021	Armstrong
2021/0136456	A1	5/2021	Srinivasan
2021/0142620	A1	5/2021	Platis
2021/0260476	A1	8/2021	Lockton

FOREIGN PATENT DOCUMENTS

CA	2279069		7/1999
CA	2287617		10/1999
EP	0649102	A3	6/1996
GB	2364485		1/2002
JP	11-46356		2/1999
JP	11-239183		8/1999
JP	2000-165840		6/2000
JP	2000-217094		8/2000
JP	2000-358255		12/2000
JP	2001-28743		1/2001
JP	2000-209563		7/2008
NZ	330242		10/1989
WO	01039506	A2	5/2001
WO	01/65743	A1	9/2001
WO	02/03698	A1	10/2002
WO	2005064506	A1	7/2005
WO	2006004855		1/2006
WO	2006004856		1/2006
WO	2007002284		1/2007
WO	2007016575		2/2007
WO	2007041667		4/2007
WO	2008027811	A2	3/2008
WO	2008115858	A1	9/2008

OTHER PUBLICATIONS

Gambling Commission, "Virtual currencies, eSports and social casino gaming-position paper," Mar. 2017, Retrieved on Jan. 22, 2020, http://gamblingcomission.gov.uk/PDF/Virtual-currencies-eSports-and -social-casino-gaming.pdf.

Sipko et al., "Machine learning for the prediction of professional tennis matches," In: MEng computing-final year project, Imperial College London, Jun. 15, 2015, http://www.doc.ic.ac.uk/teaching/distinguished-projects/2015/m.sipko.pdf.

Winview Game Producer, "Live TV Sports Play Along App WinView Games Announces Sponsorship With PepsiCo to Start This Holiday Season," In Winview Games. Dec. 21, 2016, Retrieved on Jan. 21, 2020 from , http://www. winviewgames./press-release/live-tv-sports-play-along-app-winview-games-announces-sponsorship-pepsico-start-holiday-season/.

The International Search Report and the Written Opinion for the PCT/US2019/054859 dated Feb. 4, 2020.

The International Preliminary Report dated Apr. 22, 2021 for the application PCT/US2019/054859.

Fantasy sport-Wikipedia.pdf, https://en.wikepedia.org/w/index.php?title=Fantasy_sport&oldid=685260969(Year 2015).

Two Way TV Patent and Filing Map www.twowaytv.com/version4/technologies/tech_patents.asp.

'Ark 4.0 Standard Edition, Technical Overview' www.twowaytv.com/version4/technologies/tech_ark_professionals.asp.

"Understanding the Interactivity Between Television and Mobile commerce", Robert Davis and David Yung, Communications of the ACM, Jul. 2005, vol. 48, No. 7, pp. 103-105.

"Re: Multicast Based Voting System" www.ripe.net/ripe/maillists/archives/mbone-eu-op/1997/msg00100html.

"IST and Sportal.com: Live on the Internet Sep. 14, 2004 by Clare Spoonheim", www.isk.co.usk/NEWS/dotcom/ist_sportal.html.

"Modeling User Behavior in Networked Games byTristan Henderson and Saleem Bhatti", www.woodworm.cs.uml.edu/rprice/ep/henderson.

"SMS Based Voting and Survey System for Meetings", www.abbit.be/technology/SMSSURVEY.html.

"PurpleAce Launches 3GSM Ringtone Competition", www.wirelessdevnet.com/news/2005/jan/31/news6html.

"On the Perfomance of Protocols for collecting Responses over a Multiple-Access Channel", Mostafa H. Ammar and George N. Rouskas, IEEE INCOMFORM '91, pp. 1490-1499, vol. 3, IEEE, New York, NY.

Merriam-Webster, "Game" definition, <http://www.merriam-webster.com/dictionary/agme.pg.1.

Ducheneaut et al., "The Social Side of Gaming: A Study of Interaction Patterns in a Massively Multiplayer Online Game", Palo Alto Research Center, Nov. 2004, vol. 6, Issue 4, pp. 360-369.

http://help.yahoo.com/help/us/tourn/tourn-03.html.

* cited by examiner

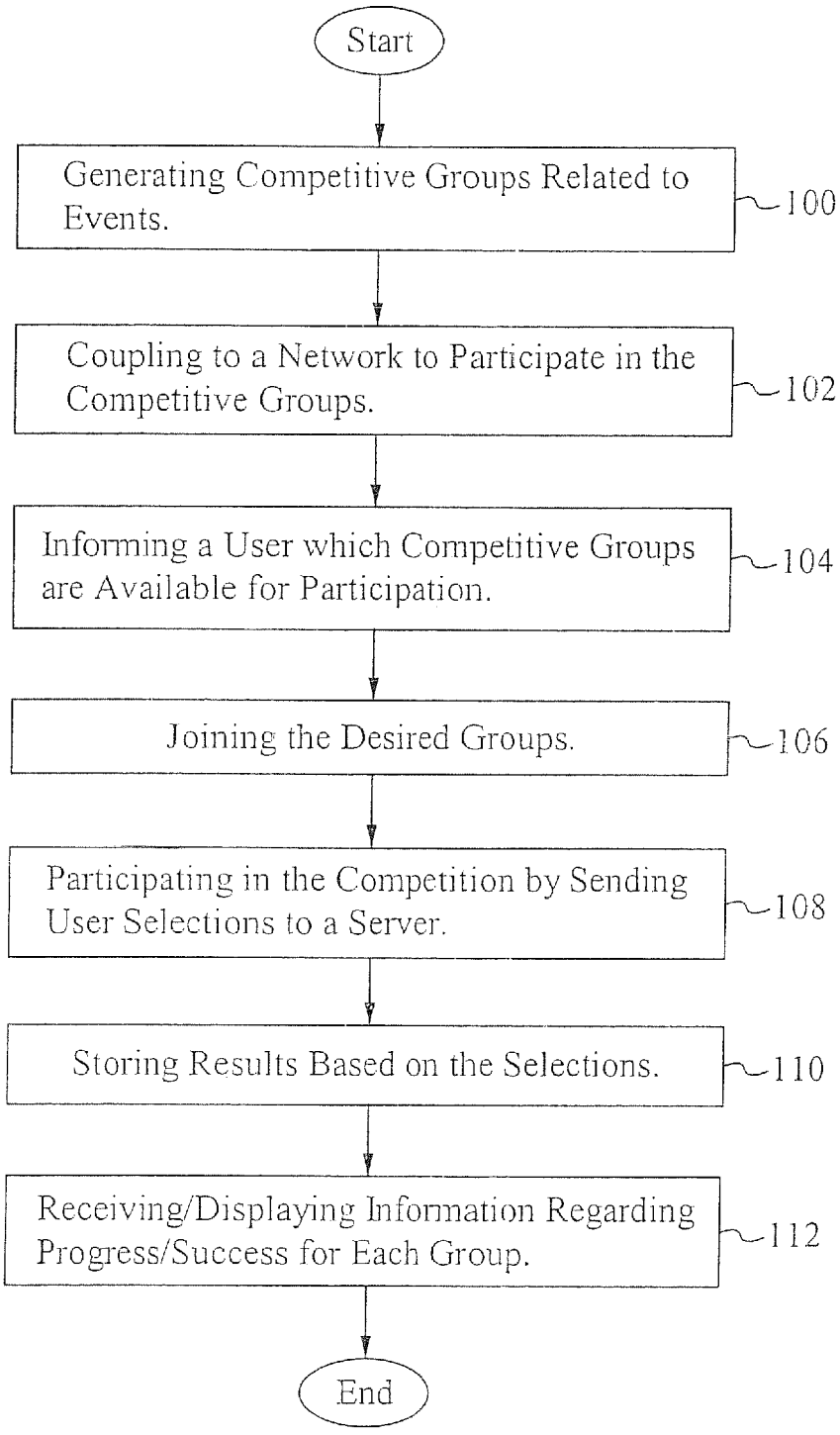

Start
Generating Competitive Groups Related to Events.
100
Coupling to a Network to Participate in the Competitive Groups.
102
Informing a User which Competitive Groups are Available for Participation.
104
Joining the Desired Groups.
106
Participating in the Competition by Sending User Selections to a Server.
108
Storing Results Based on the Selections.
110
Receiving/Displaying Information Regarding Progress/Success for Each Group.
112
End

Fig. 1

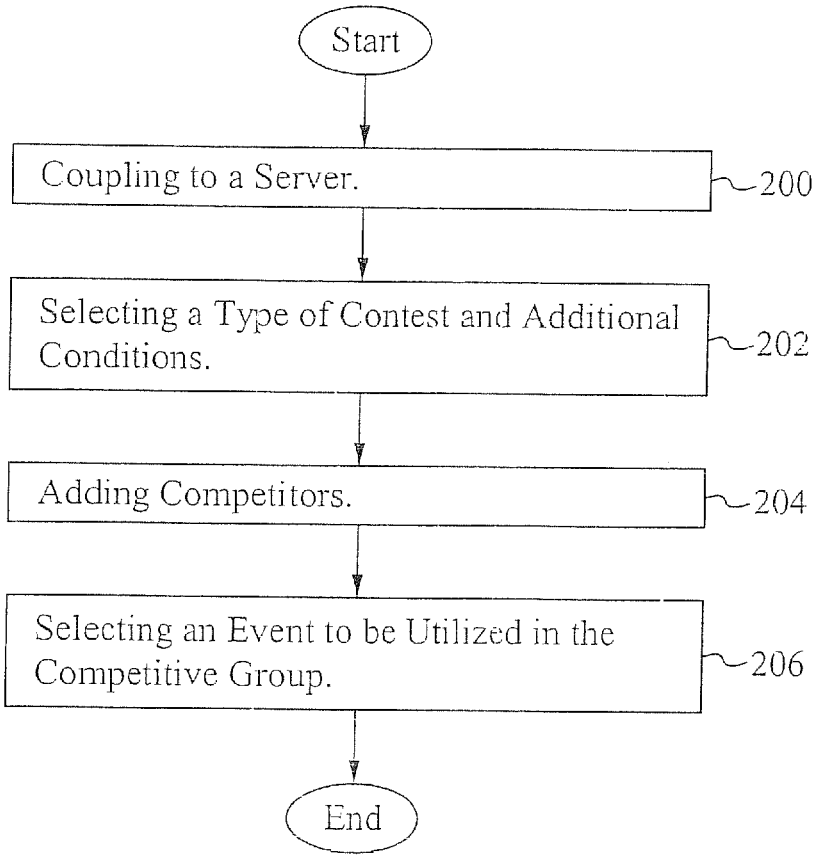

Start
Coupling to a Server.
200
Selecting a Type of Contest and Additional Conditions.
202
Adding Competitors.
204
Selecting an Event to be Utilized in the Competitive Group.
206
End

Fig. 2

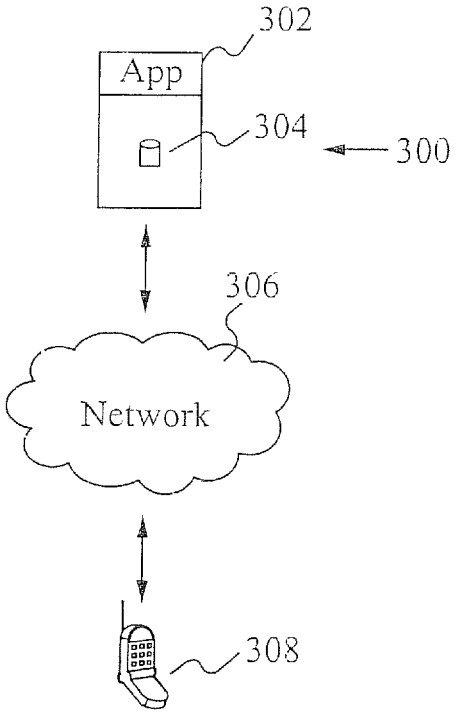

302
App
304
300
306
Network
308

Fig. 3

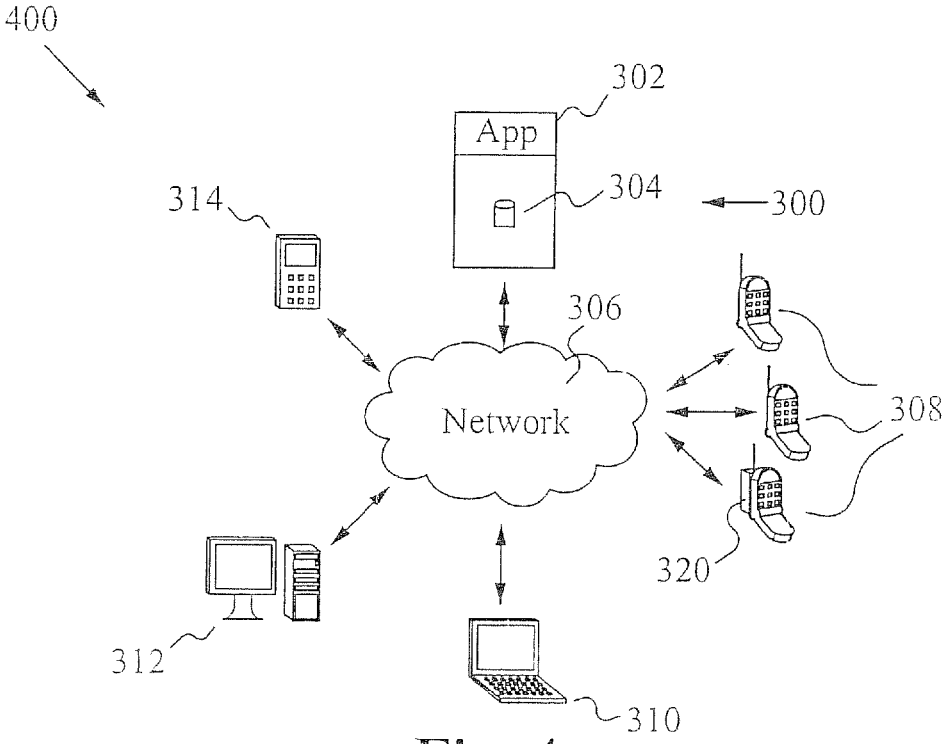

400
302
App
304
300
314
306
Network
308
320
312
310

Fig. 4

METHOD OF AND SYSTEM FOR CONDUCTING MULTIPLE CONTESTS OF SKILL WITH A SINGLE PERFORMANCE

RELATED APPLICATION(S)

This Patent Application is a continuation of co-pending U.S. patent application Ser. No. 16/942,553 filed on Jul. 29, 2020, titled "METHOD OF AND SYSTEM FOR CONDUCTING MULTIPLE CONTESTS OF SKILL WITH A SINGLE PERFORMANCE" which is a continuation of U.S. patent application Ser. No. 16/517,330, filed on Jul. 19, 2019, titled "METHOD OF AND SYSTEM FOR CONDUCTING MULTIPLE CONTESTS OF SKILL WITH A SINGLE PERFORMANCE" which is a continuation of U.S. patent application Ser. No. 15/956,619, filed on Apr. 18, 2018, titled "METHOD OF AND SYSTEM FOR CONDUCTING MULTIPLE CONTESTS OF SKILL WITH A SINGLE PERFORMANCE" which is a continuation of U.S. patent application Ser. No. 15/297,040, filed on Oct. 18, 2016, titled "METHOD OF AND SYSTEM FOR CONDUCTING MULTIPLE CONTESTS OF SKILL WITH A SINGLE PERFORMANCE" which is a continuation of U.S. patent application Ser. No. 14/956,217, filed on Dec. 1, 2015, titled "METHOD OF AND SYSTEM FOR CONDUCTING MULTIPLE CONTESTS OF SKILL WITH A SINGLE PERFORMANCE" which is a continuation of U.S. patent application Ser. No. 13/859,554, filed on Apr. 9, 2013, titled "METHOD OF AND SYSTEM FOR CONDUCTING MULTIPLE CONTESTS OF SKILL WITH A SINGLE PERFORMANCE" which is a continuation of U.S. patent application Ser. No. 13/246,464, filed on Sep. 27, 2011, titled "METHOD OF AND SYSTEM FOR CONDUCTING MULTIPLE CONTESTS OF SKILL WITH A SINGLE PERFORMANCE" which is a continuation-in-part of co-pending U.S. patent application Ser. No. 13/215,052, filed Aug. 22, 2011, and titled "METHOD OF AND SYSTEM FOR CONDUCTING MULTIPLE CONTESTS OF SKILL WITH A SINGLE PERFORMANCE" which is a continuation of U.S. patent application Ser. No. 11/652,240, filed on Jan. 10, 2007, now U.S. Pat. No. 8,002,618, titled "METHOD OF AND SYSTEM FOR CONDUCTING MULTIPLE CONTESTS OF SKILL WITH A SINGLE PERFORMANCE" which claims priority under 35 U.S.C. § 119(e) of the co-owned U.S. Provisional Patent Application No. 60/757,960, filed Jan. 10, 2006, and entitled "METHODOLOGY FOR CONDUCTING MULTIPLE CONTESTS OF SKILL WITH A SINGLE PERFORMANCE," all of which are also hereby incorporated by reference in their entirety.

FIELD OF THE INVENTION

The present invention relates to the field of distributed gaming. More specifically, the present invention relates to the field of distributed gaming utilizing a mobile device.

BACKGROUND OF THE INVENTION

In the United States alone there are over 170 million registered cellular phones. With the expiration of the U.S. Pat. No. 4,592,546 to Fascenda and Lockton, companies are able to now use the cellular phone and other mobile communication devices utilizing a multicast network to control television viewers in games of skill based upon predicting, for example, what the quarterback may call on the next play within a football game. In addition, games of skill with a common start time can be conducted simultaneously among cellular phone owners, based on classic card, dice, trivia, and other games. In order to avoid the anti-gaming laws in the various states, the winners must be determined by the relative skill, experience and practice of the player in each discrete game.

U.S. Pat. No. 5,813,913 ('913) to Berner and Lockton provides for a central computing system which includes a means of grouping participants having similar skill levels together in simultaneous, but separate, levels of competition playing an identical game. The relative performances are communicated to only those participants competing at the same skill level. The '913 patent also provides for a wireless receiving device to permanently store the specific skill level for each participant for each type of common event such as those based on televised sports or game shows. The '913 patent provides for a telephonic link at the completion of the game to collect information and update the skill level of the participants of a particular game. When a person achieves sufficient points or meets other objective criteria to graduate into another skill level, a method is provided for accomplishing this in the central computer and then transmitting an alert to the participant notifying them of their promotion. The '913 patent describes awarding prizes and providing recognition for the members of each discreet skill level in a common game. All users, no matter what level they are on, receive the same number of questions and thus the possibility of earning the same number of points. Thus direct comparisons between users at different levels, although not encouraged are possible. Such comparisons between players of disparate skills can lead to user discouragement.

Games of skill and chance have an intrinsic excitement and entertainment value. Any game is greatly enhanced by a participant's ability to know how their performance compares in relation to other participants and/or to historical performance for the game throughout the contest. As with any game of skill, competition among friends, or with strangers of similar experience, or the ability at ones option, sometimes for an extra consideration, to compete in a separate team or individual contest, offers the opportunity of increased enjoyment and prizes.

SUMMARY OF THE INVENTION

A method of and system for conducting multiple competitions of skill for a single performance are described herein. User generated competition groups and system generated competition groups allow users to participate in multiple competitions at once based on answering the same questions or making the same selections related to a single event. The users are informed of the availability of each competition either via email, text message or when logging into the network via a website. The users select which competitions groups to join. After joining the desired groups, the users then make their selections related to the event which are transmitted to the network where results are tabulated and transmitted back to the users. The results are separated for each competition group, so that users continually know where they stand in each separate competition. With multiple competition groups, users are able to have varying success from the same performance in multiple competitions.

In one aspect, a method of participating in multiple contests of skill corresponding to an event programmed in a device. The method comprises receiving a list of competitive groups to join, selecting a plurality of competitive groups to join, participating with the plurality of competitive groups

by sending selections related to the event to a server and receiving standings on a device from the server, wherein the standings are based on results from the selections. The event is selected from the group consisting of a television-based sporting event, an entertainment show, a game show, a reality show, a news show, and a commercial contained in a broadcast. The event comprises card, dice, trivia and word games played simultaneously. Receiving the standings on the device occurs during participating with the plurality of competitive groups. The standings are separated based on the plurality of competitive groups. The standings are received periodically and represent relative performance in the separate competitive groups. The competitive groups are selected from the group consisting of service provider generated competitive groups and user generated competitive groups. The service provider generated competitive groups are based on general playing characteristics. The user generated competitive groups includes contacts on a social networking site. The list of competitive groups to join is received on the device selected from the group consisting of a cellular phone, a laptop computer, a personal computer, PDA and a tablet computer. The competitive groups are maintained in a database. In some embodiments, the results are adjusted using a handicap by providing additional points to users in lower level groups. In some embodiments, the method is implemented using HTML5 or a native application.

In another aspect, a method of conducting multiple contests of skill corresponding to an event programmed in a device. The method comprises generating separate competitive groups related to the event, coupling to a network to participate in the competitive groups, informing a user which of the competitive groups are available for the user to join, joining a selected number of the competitive groups, participating with the competitive groups by sending selections related to the event to a server within the network, storing results and standings on the server, wherein the standings are based on the results and the results are based on the selections and transmitting the standings to a device. A user pays a separate consideration to play in a contest of the multiple contests of skill through a micropayments system, where a prize is supplemented or funded by an entry fee or consideration paid by all who participate in a group. The method further comprises displaying the standings on the device. The server contains an application and a database for assisting in generating the competitive group. The application includes a graphical user interface. The device contains an application for assisting in generating the competitive group. Generating competitive groups related to the event further comprises coupling to the server, selecting a type of contest and additional conditions to be included in the competitive group, adding competitors to the competitive group and selecting the event for competition by the competitive group. The type of contest is selected from the group consisting of an open contest, a head-to-head contest and a team contest. Adding competitors to the competitive group includes identifying the competitors by an identifier selected from the group consisting of a username, an email address, a cellular phone number and a personal identifier. The method further comprises sending an invitation which informs the competitors of an opportunity to be included in the competitive group. The invitation is sent by a mechanism selected from the group consisting of an email, an SMS text message and a voice message. The event is selected from the group consisting of a television-based sporting event, an entertainment show, a game show, a reality show, a news show and a commercial contained in a broadcast. The event comprises card, dice, trivia and word games played simultaneously. Transmitting the standings occurs during participating with the competitive groups. The standings are separated based on the competitive groups. The standings are received periodically and represent performance within the competitive groups. The competitive groups are selected from the group consisting of service provider generated competitive groups and user generated competitive groups. The service provider generated competitive groups are based on general playing characteristics. The user generated competitive groups include contacts on a social networking site. The device is selected from the group consisting of a cellular phone, a laptop computer, a personal computer, PDA and a tablet computer. The competitive groups are maintained in a database. The results are adjusted using a handicap by providing additional points to users in lower level groups. In some embodiments, the method is implemented using HTML5 or a native application.

In another aspect, a server device for conducting multiple contests of skill corresponding to an event comprises a storage mechanism and an application for interacting with the storage mechanism to generate and store competitive groups which are used to compete in the multiple contests of skill, the application further for receiving selections related to the event, storing results and standings based on the selections, wherein the standings are based on the results and transmitting the standings to the device. The application is further for providing an interface for generating competitive groups related to the event. The event is selected from the group consisting of a television-based sporting event, an entertainment show, a game show, a reality show, a news show and a commercial contained in a broadcast. The event comprises card, dice, trivia and word games played simultaneously. The server device communicates data for generating the competitive groups, for selecting the competitive groups to join and for submitting the selections. The standings are transmitted periodically to the device and represent performance within the competitive groups. The standings are separated based on the competitive groups. A network identifies the competitive groups a user is eligible for. The server device further comprises a database stored on the server device for managing the selections, the results, the standings and the competitive groups. The results are adjusted using a handicap by providing additional points to users in lower level groups.

In yet another aspect, a device for participating in multiple contests of skill corresponding to an event comprises a communications module for coupling to a server and an application for utilizing the communications module for coupling to a server to communicate with the server to generate competitive groups which are used to compete in the multiple contests of skill. The application utilizes the communications module for coupling to the server to send selections to and receive standings from the server. The event is selected from the group consisting of a television-based sporting event, an entertainment show, a game show, a reality show, a news show and a commercial contained in a broadcast. The event comprises card, dice, trivia and word games played simultaneously. The competitive groups comprise user generated competitive groups including contacts on a social networking site. In some embodiments, the device and the server implement HTML5.

In another aspect, a method programmed in a memory of a device comprises generating a list of competitive groups to join and presenting the list of competitive groups to join, wherein the list of competitive groups are for participating in multiple contests of skill corresponding to an event. Users

are provided a currency for watching the event or participating in the multiple contests of skill. The currency is redeemable for prizes or services. Each group pools the currency received by users and the currency is distributed to a member of each group. The member is chosen at random. The member is chosen based on skill. Participants in a group of the competitive groups pool sweepstakes entries together and divide a resulting award from the sweepstakes among the participants of the group. A game of skill is synchronized with the event. The game of skill is synchronized with the event using watermarking or fingerprinting. The multiple contests of skill are generated by users using a template. Promotional awards are awarded for participating. Frequent player points are offered for participating. Users are able to invite other user to a contest of the multiple contests of skill through a social networking site. A user pays a separate consideration to play in a contest of the multiple contests of skill through a micropayments system, where a prize is supplemented or funded by an entry fee or consideration paid by all who participate in a group.

BRIEF DESCRIPTION OF THE DRAWINGS

FIG. **1** illustrates a flowchart of a process of utilizing the present invention.

FIG. **2** illustrates a flowchart of a process of generating a user generated competition group.

FIG. **3** illustrates a graphical representation of an embodiment of the present invention.

FIG. **4** illustrates a graphical representation of a network of devices.

DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENT

A method and system for conducting a variety of competitions simultaneously are described herein. The organization of competition in a game of skill has previously taken one of three basic formats:

1) Open contests: where large numbers of players enter an event, and all of the entrants are competing against each other for a single prize pool.
2) Head-to-head: where competitors are matched between a relatively small number of players identified to compete head-to-head against each other. The actual match making occurs in many forms, such as match play or elimination tournaments.
3) Team competitions: where two or more people are teamed to compete in head-to-head elimination against other similar sized teams in match play or total score competitions.

The present invention is a system and method allowing participants to simultaneously compete in multiple contests based on a single performance. For example, a user is able to participate in an open contest, compete in a team competition, and also compete against a small group of friends all utilizing a score achieved in the same event.

As a comparison, in tournaments held for bowling or golf, players are able to compete simultaneously in a gross score tournament as well as a net (handicap) tournament with the same performance. However, the contestants in the gross and net competitions are identical. The focus of the present invention is on enabling the entry of an individual in separate competitions, with separate prizes based on their single performance (score), where the pool of entrants is different for each competition.

The default mechanism for organizing a competition for this type of game in the past has been an open contest where all competitors are automatically entered in a contest against all other players. As taught in U.S. Pat. No. 5,813,913, incorporated herein by reference, the competitive field of players is also able to be divided into separate flights or groups according to skill and experience and only scores from other competitions at the same skill level are compared. Thousands of players are able to compete in a particular football game within a particular skill level. In some embodiments, game data includes a lockout signal to prevent improper game inputs by participants. For example, a central computer system broadcasts a lockout signal to prevent improper game inputs by participants.

For this example, Player A has been rated as an "intermediate" player and is competing against 10,000 other "intermediate" players in an interactive game of skill played with a live Monday Night Football broadcast. Prior to the telecast, Player A has arranged a side competition against four of his friends. Player B has organized through a match-making interface, a small competition which includes Players A, B, C, D and E. In this example, Players A and B are intermediate players, but Players C, D and E are novice players. Player B has also organized this small competition to require a $2.00 entry fee with a winner-takes-all rule. While none of the competitions require prizes or awards, they are allowable in games of skill.

When Player A logs on to a network supporting mobile games of skill, he is presented with the option of competing in the private separate contest that Player B set up. Player A agrees to compete with the $2.00 entry fee.

Separately, Player A has previously registered to participate in a sponsored season long team competition with coworkers F, G and H. The highest two scores of their four man team are totaled, and these points are added to the season's cumulative score with the highest team scores winning prizes. Thus, for a single football game, Player A is registered in: an open competition where the best competitors win prizes, a friendly competition for a prize pool of $10, and a season long team competition.

During the football game, Player A, like all of the other players, tries to get the best possible score by predicting the plays correctly before they happen. He plays in the same manner he would playing in the open contest alone, but his performance is in fact simultaneously separately scored in these completely different competitions against a different set of opponents for different rewards.

At the end of the event, Player A scored 12,565 points, in this example. That score was in the 92nd percentile among the 10,000 intermediate players, but not high enough to win an award in that contest. That same score of 12,565 was also compared against Players B, C, D and E, and was the highest score, so Player A won the separate competition of $10. At the same time, Player A's score was the second highest among his team members in the separate team competition, and therefore was one which was totaled for the season long team competition.

It is essential to the success and enjoyment of such an invention that a potential competitor have an easy method of registering and entering these separate competitions on an ad hoc or seasonal basis. In addition, it is important to the success of such a system that all of the competitors be able to monitor periodically, not only their ongoing standings in the overall open competition at their skill level, but they will be able to periodically review all the competitions they are entered into to see the current standings.

For each of these competitions, there are two ways the group of attendees are able to be formed: A) organized by the service provider and/or a commercial sponsor or B) organized by the users themselves. Examples of service provider generated groups include those based on competitive skill level and region. For example, all intermediate players for a specific football game. An example of a user generated group is identifying five friends for a football competition. As each player enters a particular event (e.g. Monday Night Football), they are informed of the competitions they are playing in (e.g. Intermediate Global competition, the California Bay Area competition, and the personal Group competition). Each group is able to have a generic name and/or a specific name such as "personal group competition **1**" or "Bob's Competition." When a player's phone or computing device establishes a connection with the network (e.g. the Airplay Network), the network identifies all of the groups that this player is able to compete in, and the server will upload this information to the phone over a cellular connection for display to the user. When a user couples to the network with a computing device other than a cellular phone, the information is available through the Internet. In some embodiments, participation in various group competitions involves additional fees. Users have the ability to choose not to compete in any or all of the groups they have been invited to.

There are two classes of Groups: System Generated Groups (e.g. Service Provider Groups) and User Generated Groups. System Generated Groups are generated by the service administrator based on database information about the user. Examples include Intermediate Skill Level and California Bay Area San Francisco 49ers Fans. User Generated Groups are defined by one or more members. A member is able to generate a group either from the services website or from a cellular phone interface. To generate a group, a member generates a name for the group or a generic name is assigned, and then the member adds other members to the group. The member is able to add other members to the group by their handle (unique identifier), email address (for new members) or by their cellular phone number. Groups are able to be assigned to a particular event. A group is able to be designated as an active group or a party. User group owners generate a party by associating the group to a particular event (e.g. December 12^{th} Monday Night Football Game). In some embodiments, an email invitation or text message is sent to inform the members of the group that they have been invited to a party. In some embodiments, users are able to generate a group by joining together "friends" on social network sites such as Facebook, Twitter, Google+ or any other site. For example, a user is able to select "all Facebook contacts" to invite to join a group.

The game control server maintains a list of groups. Service Provider Groups are automatically assigned to events. User Groups are assigned to events by the group owners. In both cases, a list of active groups is known before the start of the event such as parties for a particular event. Within each of these known groups a list of all the participants is also maintained. This is able to be implemented in several ways. The most common way is via a database manager. This is able to be done through a data structure that is loaded for each event, and a database is one natural implementation to keep track of the group/participant relationships.

Throughout the game, a server manages the scores for every player. The scores are updated in a central location such as a database server, and are sorted with the members of a particular group to identify the rankings for each member in the competition.

During an event, scores and rankings are sent to members of the various groups. This is done after each scoring opportunity, or at a slower pace such as every five minutes or every five scoring opportunities. For small groups (e.g. 20 or less active participants) all of the scores and rankings are able to be sent by the server and displayed on the participant's device. For very large groups there are two approaches that can be taken: 1) Common message or 2) Individualized message. Sending a common message for large groups is much more efficient on the network, and is able to still provide a significant amount of information. The message is able to contain the top 20 names and scores for this group as well as the score that is required to be in the top 95%, 90%, 85%, . . . 5%. When the client receives this message, it determines what percentile the user is in by extrapolating its score between the percentile scores that the user is between. In sending an individual message for a large group, the server would still send the top 20 names and scores as well as the exact percentile that this user falls in.

Each separate tournament is managed effectively. A message is sent from the game server to the individual clients associated with each group. For very large groups, this message is able to be identical for all of those that are receiving the message. Past results tracked on the cell phone and in more detail on the website will track the rankings in each of the different groups associated with an event. A selection of pre-produced audio and visual comments, for example, in the nature of taunts and cheers are able to be selected from a menu and sent to a specific individual or to all competitors in the group.

Games of skill played on the Internet or cellular phones based upon live telecast sporting events, popular game shows or commercials contained within the broadcast are expected to attract a large number of potential competitors. As in all games of skill, there will be a wide variety of experience and talent and many motivations to play. To some, the enjoyment will be competing in open competitions against skilled players to test their medal. For others, it may be just the ability to compete and possibly win against a handful of close friends who share the same passion for the underlying televised event. Others may be more team oriented and derive more enjoyment from participating as a member of the group. The method and systems described herein provide not only the ability for an individual to find a group of competitors and a contest attractive to them, but also allows them to compete in multiple contests simultaneously with the identical performance and with the same investment of time. This increases not only the sense of community, but provides greater opportunities for the satisfaction of beating friends as well as winning prizes.

FIG. **1** illustrates a flowchart of a process of utilizing the present invention. In the step **100**, competitive groups are generated related to events. The competitive groups are either system generated or user generated. As described above, a system generated group is generally based on skill level, location or another generic attribute that some users qualify for, while other users do not. A user generated group is selected by a user where participants are added to the group by entering a username, email address, cellular phone number, or another distinguishing identifier. User generated groups typically include groups of friends, co-workers and other groups of people that a user wants to compete with. Any number of system groups and user groups are able to be generated. In addition to determining who is included in the

competition, the events being played within the competition are selected. For example, a user is able to set up a Monday Night Football league, wherein every Monday night for the regular season of the NFL, the users within the group compete based on the Monday night game. In some embodiments, the specific games that the users compete in are selected at later dates beyond the initial generation of the group.

In the step **102**, users couple to a network (e.g. a social network such as GetGlu, Miso or a network game) to participate in the generated competitions. In the step **104**, the users are informed which competitions are available for participation. For example, an intermediate user couples to the network using his cellular phone and is greeted with a list of competitions available for him to join. The list includes, a free open competition for all intermediate players for a specified game, an individual group competition that his friend invited him to join also for the same specified game, a team competition that his co-workers wanted him to be a part of where it is a season long tournament which includes the same specified game and another system generated competition also for the same game that costs $10 to enter with larger prizes available than the free competition. In the step **106**, each user who has coupled to the network joins the groups desired. Continuing with the example above, the user decides to join the free open competition, the friend's competition and the co-worker competition but does not join the $10 competition.

In the step **108**, the users then participate in the competitions by sending user selections (e.g. predictions) to a server within the network for monitoring, analyzing and determining results based on the selections. Based on the results, standings for each competition are also determined. Using the example above again, although the user joined three different competitions related to a single game, the user competes exactly the same as if he entered in only one of the competitions, since his input is distributed for the three different competitions.

In the step **110**, the results based on the users' selections are stored. The results are stored in a way such that they are easily retrieved for each competition. For example, a storing mechanism such as a database stores the results of Game X for Player A where Player A's score is 1000. In the free open competition, Player A's score was not good enough to win a prize. However, in the friendly competition, it was the highest score, and in the co-worker team competition it was a score usable by the team. Therefore, although the score was not a winning score for one competition, it was a beneficial score in the other two competitions. By competing in multiple competitions for the same game/event, a user's results/score could provide different outcomes depending on the competition. Therefore, the proper associations of each competition and the score are required.

In the step **112**, each user receives the results and/or standings on his cellular phone or computer. The results and/or standings arrive at varying times depending on the setup of the system. The results and/or standings are received or at least accessible after the competition ends. If desired, the results and/or standings are also received throughout the competition such as every five minutes or after a certain number of selections are made. The standings from the results determine who wins at the end of the competition. While displayed during the game, the standings show what position the user is in. The standings are based on the results of the selections made by the users.

FIG. **2** illustrates a flowchart of a process of generating a user generated competition group. In the step **200**, a user couples to a server within a network (e.g. the Airplay Network) storing an application to generate a competition group. In some embodiments, the application is stored on the user's cellular phone instead of or in addition to on the server and is able to utilize HTML5 or use native applications on the user's cellular phone such as Java and Flash, or HTML5. Using HTML5, the processing is performed on the server, and HTML5 allows the browser on the mobile device to appear as an application even though it is a web page. Preferably, the application provides a graphical user interface such as an interactive website for easily generating the competition group. In the step **202**, the user selects the type of competition, such as open, head-to-head or team, in addition to other types of competitions. The user also adds any additional requirements or conditions such as intermediate players only or $2 entry fee with the winner-take-all. Additionally, the user labels or names the competition group. In the step **204**, competitors are added to the competition. The competitors are added based on a username, phone number, email address or another identification mechanism. In the step **206**, either at the initial set up of the competition group or later on, one or more events are selected to be competed in. For example, if a user wants to set up a competition specifically for Super Bowl XLI, he is able to designate that immediately. Or if a user wants to start a week-long competition related to Jeopardy, he is able to do that as well. The user is also able to retain the same group and modify it to generate a second competition. For example, after the Super Bowl XLI competition ends, the user is able to generate another competition with the same group for the NCAA BCS Bowl Championship Game. Users are able to generate as basic or as complex a competition group as desired. As described above, it is able to be for a single event, a variety of events or an entire season of events. Preferably, a database is utilized to organize the competition groups for easy correlation of data.

FIG. **3** illustrates a graphical representation of an embodiment of the present invention. A server **300** contains an application **302** and a storage mechanism **304**. The application **302** is preferably a web application or at least has a web component to enable users to interact with a web graphical user interface to input data and review data. The storage mechanism **304** is utilized for storing selections and results from the selections as well as competition groups. The storage mechanism **304** preferably includes a database for organizing the data including the selections, results, standings and competition groups amongst other data needed for executing the competitions. The server **300** is part of a network **306**. A device **308** couples to the server **300** through the network **306**. In some embodiments the network **306** includes the Internet. In some embodiments, the network **306** includes a cellular network. Also, in some embodiments, the network **306** includes both the Internet and a cellular network. The device **308** is selected from a cellular phone, a PDA, a computer, a laptop, a smart phone (e.g. an iPhone®), a tablet (e.g. an iPad®), or any other device capable of communicating with the server **300**. As described above, in some embodiments, an application for allowing users to generate competition groups, input selections and communicate with the server in general is included in the device **308** instead of or in addition to the application **302** on the server **300**.

FIG. **4** illustrates a graphical representation of a network of devices. As described above, the server **300** contains the application **302** and the storage mechanism **304** for inputting and outputting data related to the competitions. The device **308**, couples to the network through a network **306**. As

described above, the network includes either the Internet, a cellular network or both. Although the device **308** is able to be a device other than a cellular phone as shown, other devices are also shown coupled to the network **306** therefore forming a network of devices **400**. The other devices include a laptop **310**, a computer **312** and a PDA **314**. One of the devices **308** is shown with an application **320** for enabling the user to generate competition groups and communicate with the server **300**.

In some embodiments, handicaps are implemented so that users of different levels are able to compete more fairly. Handicaps provide additional points to users at lower levels so their score is comparable to a more advanced user. The handicaps are determined based on analysis of the scoring. For example, if advanced users on average score 3000, while intermediate users on average score 2000 and beginners on average score 1000 for the same set of questions, then a fair handicap is 1000 per difference in level. Thus, when there is a friendly competition between one user who is advanced by playing every week and three beginner users who play once a month just for fun, a straight game without handicaps is not likely going to be a close competition. However, if the beginner users are given help to put them on par with the advanced user, then the outcome of the competition could result in a beginner user winning.

In some embodiments, each user competes in the same game, but slightly different sets of questions/choices are posed based on the competition level. For example, an intermediate user chooses to play in an open intermediate competition and also with a group of beginner friends. Each of the beginner users is asked to choose what type of play the following play is going to be (e.g. Run or Pass). The intermediate user is also asked to choose the following play. However, the intermediate user is also asked to choose which direction the play will go (e.g. Left or Right). Therefore, the same game is being played to some extent, but there is a slight modification, so that more advanced users have additional options. However, when scoring, the additional options apply only across the same level. Thus, the user selecting Left or Right correctly has no effect on the scoring in the beginner competition. It only affects scoring for the intermediate competition. Thus, users are able to compete at different levels for the same event.

In some embodiments, interactive advertising is used in games of chance and/or skill, sweepstakes, promotional awards, offering frequent player points. For example, a game of skill is played where the game is based on the content of an advertisement or commercial. In some embodiments, users are provided with a template and/or other facilities to generate separate games and contests within the games and promotions available to all.

In some embodiments, a contest involves a sweepstakes event, a game of skill or a promotional event available to all viewing a common event, such as a television broadcast or webcast. In some embodiments, the event is a television commercial. In some embodiments, each and every viewer receives a pre-determined amount of fungible currency such as "points." In some embodiments, the points are earned for watching and/or participating with the television commercial. In some embodiments, the points are redeemable for prizes, services or any other purpose. A user or member of the service is able to choose from an existing template of game formats, or segments of formats, and using the service's ability to couple to and communicate with their friends who are members watching or otherwise, or through social networks such as Facebook, Twitter or Google+, invite friends to participate in their separate event. In some embodiments, the event is able to require all participants in a cohort to pool all points they are to receive for watching and have all points go to that member from this cohort chosen at random utilizing software supplied by the company operating the service. The system selects and credits all of the points won to the appropriate person's account. Instead of the points being awarded by chance, the winner of the points is based on skill, for example, is able to be the person from the cohort who answers all of the questions correctly with the cumulative fastest response time (e.g. the least time elapsed between display of the question and the entry of the correct answer). In some embodiments, the points are awarded in another manner. In some cases, users form teams and challenge other competitors (e.g. friends) to form teams where total scores are used, for teams with a specific number of members, or average scores for teams with unlimited number of members.

In some embodiments, participants about to watch a television commercial in exchange for a free entry into a sweepstakes available to all viewers have the ability to invite friends to pool their sweepstakes entries so that if any of the accepting members of the group is chosen, the resulting award is divided among the group as provided by the terms of the invitation, for example, to be shared equally or to be divided equally among participants (possibly participants chosen at random). In some embodiments, the contest involves solving a puzzle or playing a word game like Scrabble®, where team contests are enabled which permit teams of friends to work collaboratively.

Users are able to leverage various groups of friends to join a closed contest, where the organizer not only provides the system and method of generating the group but also provides various templates or separate elements of games and contests allowing the organizer/inviter to click on the desired elements, designate eligible friends, and have a company generate the separate contest, administer the contest and the results and credit the winnings.

In some embodiments, payment of separate consideration such as "points" from member's credit balances or separate cash micropayments is able to be implemented. In some embodiments, a user pays a separate consideration to play in a contest of the multiple contests of skill through a micropayments system, where a prize is supplemented or funded by an entry fee or consideration paid by all who participate in a group.

In some embodiments, a game of skill is synchronized with a television broadcast. The synchronization is able to be implemented in any manner including, but not limited to, watermarking, fingerprinting and any other implementation. For example, the mobile device and/or the game of skill application determines the start (or some other point) in a broadcast, synchronizes the game with the broadcast. For example, a game that is based on commercials, is synchronized with the broadcast, so that when the commercials appear, the game begins. In some embodiments, advertisements/commercials are displayed on a user's mobile device synchronized with the content of the television. For example, if user is watching football on television, the mobile device is able to detect that and present the user a football or beer advertisement.

One methodology of synchronizing a game of skill or chance with a television broadcast requires the cooperation of an employee of the game provider based on visual observation of the telecast for that market, utilizing a personal computer and the Internet, or by utilizing their local cellular phone, all coupled to the game server.

Another methodology includes utilizing an audio or video recognition system with online access to the broadcast of the underlying television program for each separate market which provides real-time tracking of the television broadcast to the game control server, ensuring the game data file is able to be precisely synchronized to the television picture. Information is also able to be inserted in a Vertical Banking Interval (VBI) of the taped syndicated show and tracked online in real time by the game control server. For remote telecasts and online connection from a remote device, reading data embedded in the VBI via a high speed connection to the central game server is utilized. Utilizing some of the procedures outlined above, the propagation delays in the receipt of the cellular transmissions are also monitored and the game server adjusts the data files containing the "lock outs" to accommodate the systemic delay in the delivery of the game data on the cellular networks. In some embodiments, a signal based on audio recognition is sent to a server which synchronizes a preproduced file displayed on cohorts' clients.

Another methodology, with the cooperation of the producers of game shows, precise audio or video events in the telecast could either be added to the video, such as a visible count down, or existing events in the telecast identified by the producers as synchronization points which the competitors could utilize as start points for the previously downloaded data files at the press of an appropriate button on their cellular phone. This would trigger the launch of a program previously downloaded to the phone's RAM. Then, time synchronization would be launched.

One more methodology, referred to as watermarking, uses an audio signal, possibly sub-audible to humans, typically an audio artifact unique to a particular program, which is inserted into the taped audio track recognizable by the audio receiver in a cellular phone which would be utilized to start and/or continually keep the pre-produced data files resident on the cellular phone in synchronization with the telecast.

"Fingerprinting" records the soundtrack of every television programs' audio to a server. The microphone on a client is coupled to a massive audio archive on a server to identify what television program is being viewed and synchronize files on a server with the unfolding broadcast including the commercials.

In some embodiments, the game experience for users competing in games of skill or chance who experience a variety of propagation delays relating to where and how they receive a television broadcast is synchronized (e.g. using watermarking or fingerprinting).

To utilize the present invention, users select from or generate competition groups to participate in. The users select system generated competition groups which are specific to levels, geographic locations and other general categories. The users are also able to generate their own competition groups which include friends, family, co-workers or other groups of people they choose. After the competition groups are generated, users are able to join whichever group they are invited to. After joining one or more groups, the users are able to join additional groups beyond that as they are generated and become available to the user. A user is informed of the competition groups available for entering either by email, Short Message Service (SMS) text message, voice message or when the user couples to the network to view/play competitions. After joining the desired competition groups, the user participates in the competitions by answering questions or making selections based on viewing a sporting event, television show, game show, commercials contained within the broadcast or other event where skill or chance is involved in making choices. In addition, games of skill or games of chance with a common start time can be conducted simultaneously in real-time, based on classic card, dice, trivia, word and other games. The selections/answers/predictions are stored and results and/or standings are sent to the user. The results and/or standings throughout the competition show how well the user is doing compared to other competitors via standings, and when the competition is over, the results and/or standings determine who the winner is. Additionally, since multiple competitions are occurring based on a single event, the results and standings are organized so that the user is able to understand how he is doing in each event. For example, if a user is winning by a large margin in his two friendly competitions, but is slightly out of prize position in the open competition, he will not simply relax and coast to victory in his friendly competitions. He is able to realize that by performing slightly better, he still has a chance to win a prize in the open competition, while still winning easily in the friendly competitions.

In operation, the present invention allows users to set up and compete in multiple competitions for a single event. Although users are competing against typically different competitors in different competition groups, the same selections are utilized to produce scores that have specific meaning based on the competition group. As described above, a user may lose in one competition group but win in another competition group because the competitors are different. Also, the requirements of each group are different as well. For example, in team play, if the top two scores are counted and the user has one of the top two scores, then his score is important even though he lost in a different competition group. In another example, the competition group is a season long event where there is no weekly winner, but only a year-end winner. Thus, although the competitor is doing terrible one week and has no chance of winning the separate weekly competition, the user is still encouraged to do as well as possible for the year-end total. By allowing users to compete in multiple competition groups for the same event, the user interaction increases substantially. For example, instead of a user simply playing his standard weekly intermediate football competition, the user is also invited to play in his family's tournament for bragging rights, his friend's competition where the winner gets $20 and his co-worker's competition where the lowest score pays for a round of drinks the following Friday. With more chances to win, users have a much more vested interest in competing. To ensure users do not get frustrated with the scoring, the results and/or standings are displayed in a very user-friendly format so that a user knows how well he is doing in each respective competition.

In some embodiments, multiple servers are used within the network. For example, one server is dedicated for the scoring, a separate server is dedicated for the database and another server is dedicated for hosting the graphical user interface.

The present invention has been described in terms of specific embodiments incorporating details to facilitate the understanding of principles of construction and operation of the invention. Such reference herein to specific embodiments and details thereof is not intended to limit the scope of the claims appended hereto. It will be readily apparent to one skilled in the art that other various modifications may be made in the embodiment chosen for illustration without departing from the spirit and scope of the invention as defined by the claims.

What is claimed is:

1. A method programmed in a server device, the method comprising:

a. determining a user's physical location and the user's eligibility to participate in a set of competitive participant groups based on the user's physical location;

b. providing to a user device from the server device the set of competitive participant groups to join;

c. receiving user input including a selection of a plurality of competitive participant groups to join, wherein the plurality of competitive participant groups correspond to one or more events;

d. receiving additional user input including a set of event selections related to the one or more events, wherein the set of event selections comprises predictions available before the one or more events of occurrences happening during the one or more events and enables simultaneously participating with the plurality of competitive participant groups; and

e. triggering a lockout signal at the server device to prevent further additional user input.

2. The method of claim 1 wherein the set of competitive participant groups to join is further based on a user's skill level.

3. The method of claim 1 wherein the set of competitive participant groups to join is further based on an amount of money risked by a user.

4. The method of claim 1 wherein the set of competitive participant groups to join is further based on a number of competitors in the participant groups.

5. The method of claim 1 wherein the set of competitive participant groups to join is further based on a division of winnings among participants in the group.

6. The method of claim 1 further comprising receiving the user input to join an additional competitive participant group that has been generated after a user has selected the plurality of competitive participant groups to join.

7. The method of claim 1 further comprising providing at least one competitive participant group of the set of competitive participant groups to join using a short message service message.

8. The method of claim 1 further comprising providing real-time standings separated based on each competitive participant group.

9. The method of claim 1 wherein the one or more events are viewed in person by a person physically attending a venue corresponding to the one or more events, and the lockout is triggered by the person physically attending the venue.

10. The method of claim 1 wherein the lockout signal occurs immediately before participants are able to see or hear relevant live action unfold.

11. The method of claim 1 wherein the lockout signal involves an in-progress play in the event, not during a stoppage, and preventing submitting the response before a critical element of the in-progress play unfolds.

12. The method of claim 1 wherein the lockout signal suspends an ability to enter a prediction for a limited amount of time.

13. The method of claim 1 wherein the set of event selections further comprises predictions available during the one or more events of occurrences happening during the one or more events.

14. A server device comprising:

a. a memory for storing an application, the application configured for

i. determining a user's physical location and the user's eligibility to participate in a set of competitive participant groups based on the user's physical location;

ii. providing the set of competitive participant groups to join;

iii. receiving user input including a selection of a plurality of competitive participant groups to join, wherein the plurality of competitive participant groups corresponds to one or more events;

iv. receiving additional user input including a set of event selections related to the one or more events, wherein the set of event selections comprises predictions available before the one or more events of occurrences happening during the one or more events and enables simultaneously participating with the plurality of competitive participant groups;

v. triggering a lockout signal to prevent further additional user input; and

vi. providing real-time standings and results related to the set of event selections simultaneously to each of the competitive participant groups, wherein the real-time standings are based on the results; and

b. a processor for processing the application.

15. The server device of claim 14 wherein the application is further configured for receiving the user input to join an additional competitive participant group that has been generated after a user has selected the plurality of competitive participant groups to join.

16. The server device of claim 14 wherein the application is further configured for providing at least one competitive participant group of the set of competitive participant groups to join using a short message service message.

17. The server device of claim 14 wherein the one or more events are viewed in person by a person physically attending a venue corresponding to the one or more events, and the lockout is triggered by the person physically attending the venue.

18. The server device of claim 14 wherein the lockout signal involves an in-progress play in the event, not during a stoppage, and preventing submitting the response before a critical element of the in-progress play unfolds.

19. The server device of claim 14 wherein the set of competitive participant groups to join is further based on a user's skill level.

20. The server device of claim 14 wherein the set of competitive participant groups to join is further based on an amount of money risked by a user.

21. The server device of claim 14 wherein the set of competitive participant groups to join is further based on a number of competitors in the participant groups.

22. The server device of claim 14 wherein the set of competitive participant groups to join is further based on a division of winnings among participants in the group.

23. A device comprising:

a. a memory for storing an application, the application configured for

i. determining a user's physical location and the user's eligibility to participate in a set of competitive participant groups based on the user's physical location;

ii. receiving the set of competitive participant groups to join;

iii. receiving user input including a selection of a plurality of competitive participant groups to join, wherein the plurality of competitive participant groups corresponds to one or more events;

iv. receiving additional user input including a set of event selections related to the one or more events,

wherein the set of event selections comprises predictions available before the one or more events of occurrences happening during the one or more events and enables simultaneously participating with the plurality of competitive participant groups;

v. receiving a lockout signal to prevent further additional user input; and

vi. displaying real-time standings and results related to the set of event selections simultaneously to each of the competitive participant groups, wherein the real-time standings are based on the results; and

b. a processor for processing the application.

24. The device of claim **23** wherein the application is further configured for receiving the user input to join an additional competitive participant group that has been generated after a user has selected the plurality of competitive participant groups to join.

25. The device of claim **23** wherein the application is further configured for receiving at least one competitive participant group of the set of competitive participant groups to join using a short message service message.

26. The device of claim **23** wherein the one or more events are viewed in person by a person physically attending a venue corresponding to the one or more events, and the lockout is triggered by the person physically attending the venue.

27. The device of claim **23** wherein the set of competitive participant groups to join is further based on a user's skill level.

28. The device of claim **23** wherein the set of competitive participant groups to join is further based on an amount of money risked by a user.

29. The device of claim **23** wherein the set of competitive participant groups to join is further based on a number of competitors in the participant groups.

30. The device of claim **23** wherein the set of competitive participant groups to join is further based on a division of winnings among participants in the group.

31. A method programmed in a server device, the method comprising:

a. determining a user's physical location and the user's eligibility to participate in a set of competitive participant groups based on the user's physical location;

b. receiving user input including a set of event selections related to one or more events, wherein the set of event selections comprises predictions available prior to the beginning of the first one of the one or more events, of occurrences happening during the one or more events and enables simultaneously participating with a plurality of the competitive participant groups; and

c. triggering a lockout signal at the server device to prevent further additional user input.

32. The method of claim **31** wherein the plurality of competitive participant groups is further based on a user's skill level.

33. The method of claim **31** wherein the plurality of competitive participant groups is further based on an amount of money risked by a user.

34. The method of claim **31** wherein the plurality of competitive participant groups is further based on a number of competitors in the participant groups.

35. The method of claim **31** wherein the plurality of competitive participant groups is further based on a division of winnings among participants in the group.

36. The method of claim **31** further comprising receiving additional user input including a selection of the plurality of competitive participant groups to join.

37. The method of claim **36** further comprising providing at least one competitive participant group of the plurality of competitive participant groups to join using a short message service message.

38. The method of claim **31** further comprising providing real-time standings separated based on each competitive participant group.

39. The method of claim **31** wherein the one or more events are viewed in person by a person physically attending a venue corresponding to the one or more events, and the lockout is triggered by the person physically attending the venue.

40. The method of claim **31** wherein the lockout signal occurs immediately before participants are able to see or hear relevant live action unfold.

41. The method of claim **31** wherein the set of event selections further comprises predictions available during the one or more events of occurrences happening during the one or more events.

42. A server device comprising:

a. a memory for storing an application, the application configured for

i. determining a user's physical location and the user's eligibility to participate in a set of competitive participant groups based on the user's physical location;

ii. receiving user input including a set of event selections related to one or more events, wherein the set of event selections comprises predictions available prior to the beginning of the first one of the one or more events, of occurrences happening during the one or more events and enables simultaneously participating with the plurality of competitive participant groups;

iii. triggering a lockout signal to prevent further additional user input; and

iv. providing real-time standings and results related to the set of event selections simultaneously to each of the competitive participant groups, wherein the real-time standings are based on the results; and

b. a processor for processing the application.

43. The server device of claim **42** wherein the application is further configured for receiving the user input to join an additional competitive participant group that has been generated after a user has selected the plurality of competitive participant groups to join.

44. The server device of claim **42** wherein the application is further configured for providing at least one competitive participant group of the set of competitive participant groups to join using a short message service message.

45. The server device of claim **42** wherein the one or more events are viewed in person by a person physically attending a venue corresponding to the one or more events, and the lockout is triggered by the person physically attending the venue.

46. The server device of claim **42** wherein the set of competitive participant groups is further based on a user's skill level.

47. The server device of claim **42** wherein the set of competitive participant groups is further based on an amount of money risked by a user.

48. The server device of claim **42** wherein the set of competitive participant groups is further based on a number of competitors in the participant groups.

49. The server device of claim **42** wherein the set of competitive participant groups is further based on a division of winnings among participants in the group.

* * * * *

Exhibit 8

US011951402B2

(12) **United States Patent**
Lockton et al.

(10) **Patent No.: US 11,951,402 B2**
(45) **Date of Patent: Apr. 9, 2024**

(54) **METHOD OF AND SYSTEM FOR CONDUCTING MULTIPLE CONTESTS OF SKILL WITH A SINGLE PERFORMANCE**

(71) Applicant: **Winview, Inc.**, Redwood City, CA (US)

(72) Inventors: **David B. Lockton**, Redwood City, CA (US); **Mark K. Berner**, Santa Clara, CA (US); **Mark J. Micheli**, San Francisco, CA (US)

(73) Assignee: **Winview IP Holdings, LLC**, Charlotte, NC (US)

(*) Notice: Subject to any disclaimer, the term of this patent is extended or adjusted under 35 U.S.C. 154(b) by 0 days.

(21) Appl. No.: **17/716,311**

(22) Filed: **Apr. 8, 2022**

(65) **Prior Publication Data**

US 2022/0226738 A1 Jul. 21, 2022

Related U.S. Application Data

(63) Continuation of application No. 16/934,886, filed on Jul. 21, 2020, now Pat. No. 11,298,621, which is a (Continued)

(51) **Int. Cl.**
A63F 13/795 (2014.01)
A63F 13/30 (2014.01)
(Continued)

(52) **U.S. Cl.**
CPC ***A63F 13/795*** (2014.09); ***A63F 13/30*** (2014.09); ***A63F 13/332*** (2014.09);
(Continued)

(58) **Field of Classification Search**
None
See application file for complete search history.

(56) **References Cited**

U.S. PATENT DOCUMENTS

2,010,516 A 8/1935 Hoffmann
2,051,615 A 8/1936 Miles
(Continued)

FOREIGN PATENT DOCUMENTS

CA 2252074 11/1997
CA 2252021 11/1998
(Continued)

OTHER PUBLICATIONS

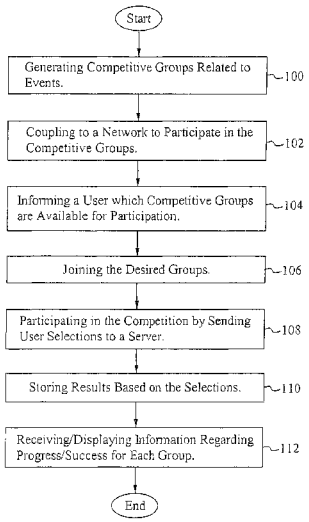
"IST and Sportal.com: Live on the Internet Sep. 14, 2004 by Clare Spoonheim", www.isk.co.usk/NEWS/dotcom/ist_sportal.html.
(Continued)

Primary Examiner — Ronald Laneau
(74) *Attorney, Agent, or Firm* — Haverstock & Owens, A Law Corporation

(57) **ABSTRACT**

A method of and system for conducting multiple competitions of skill for a single performance are described herein. User generated competition groups and system generated competition groups allow users to participate in multiple competitions at once based on answering the same questions or making the same selections related to a single event. The users are informed of each competition either via email, text message or when logging into the network via a website. The users select which competitions groups to join. After joining the desired groups, the users then make their selections related to the event which are transmitted to the network where results are tabulated and transmitted back to the users. The results are separated based on each competition group, so that users can continually know where they stand in each separate competition. With multiple competition groups, users are able to have varying success from the same performance in multiple competitions.

19 Claims, 3 Drawing Sheets



Related U.S. Application Data

continuation of application No. 16/426,788, filed on May 30, 2019, now Pat. No. 10,744,414, which is a continuation of application No. 15/900,480, filed on Feb. 20, 2018, now Pat. No. 10,343,071, which is a continuation of application No. 15/296,983, filed on Oct. 18, 2016, now Pat. No. 9,919,221, which is a continuation of application No. 14/927,276, filed on Oct. 29, 2015, now Pat. No. 9,498,724, which is a continuation of application No. 14/723,363, filed on May 27, 2015, now Pat. No. 9,314,701, which is a continuation of application No. 14/044,173, filed on Oct. 2, 2013, now Pat. No. 9,067,143, which is a continuation of application No. 13/215,052, filed on Aug. 22, 2011, now Pat. No. 8,622,798, which is a continuation of application No. 11/652,240, filed on Jan. 10, 2007, now Pat. No. 8,002,618.

(60) Provisional application No. 60/757,960, filed on Jan. 10, 2006.

(51) **Int. Cl.**

A63F 13/332	(2014.01)
A63F 13/335	(2014.01)
A63F 13/35	(2014.01)
A63F 13/537	(2014.01)
A63F 13/798	(2014.01)
A63F 13/816	(2014.01)
G07F 17/32	(2006.01)

(52) **U.S. Cl.**

CPC ***A63F 13/335*** (2014.09); ***A63F 13/35*** (2014.09); ***A63F 13/537*** (2014.09); ***A63F 13/798*** (2014.09); ***A63F 13/816*** (2014.09); ***G07F 17/3276*** (2013.01); ***G07F 17/3295*** (2013.01)

(56) **References Cited**

U.S. PATENT DOCUMENTS

2,193,638	A	3/1940	Morton
2,274,933	A	3/1942	Peck
2,831,105	A	4/1958	Parker
3,550,944	A	12/1970	Chamberlin
3,562,650	A	2/1971	Gossard et al.
3,689,071	A	9/1972	Kucera
4,141,548	A	2/1979	Everton
4,270,755	A	6/1981	Willhide et al.
4,386,377	A	5/1983	Hunter, Jr.
4,496,148	A	1/1985	Morstain et al.
4,521,803	A	6/1985	Glittinger
4,592,546	A	6/1986	Fascenda et al.
4,816,904	A	3/1989	McKenna et al.
4,918,603	A	4/1990	Hughes et al.
4,930,010	A	5/1990	MacDonald
5,013,038	A	5/1991	Luvenberg
5,018,736	A	5/1991	Pearson et al.
5,035,422	A	7/1991	Berman
5,073,931	A	12/1991	Audebert et al.
5,083,271	A	1/1992	Thatcher et al.
5,083,800	A	1/1992	Lockton
5,119,295	A	6/1992	Kapur
5,120,076	A	6/1992	Luxenberg et al.
5,213,337	A	5/1993	Sherman
5,227,874	A	7/1993	Von Kohom
5,256,863	A	10/1993	Ferguson
5,263,723	A	11/1993	Pearson et al.
5,283,734	A	2/1994	Von Kohorn
5,327,485	A	7/1994	Leaden
5,343,236	A	8/1994	Koppe et al.
5,343,239	A	8/1994	Lappington et al.
5,417,424	A	5/1995	Snowden
5,462,275	A	10/1995	Lowe et al.
5,479,492	A	12/1995	Hofstee et al.
5,488,659	A	1/1996	Millani
5,519,433	A	5/1996	Lappington
5,530,483	A	6/1996	Cooper
5,553,120	A	9/1996	Katz
5,566,291	A	10/1996	Boulton et al.
5,585,975	A	12/1996	Bliss
5,586,257	A	12/1996	Perlman
5,589,765	A	12/1996	Ohmart et al.
5,594,938	A	1/1997	Engel
5,618,232	A	4/1997	Martin
5,628,684	A	5/1997	Jean-Etienne
5,636,920	A	6/1997	Shur et al.
5,638,113	A	6/1997	Lappington
5,643,088	A	7/1997	Vaughn et al.
5,663,757	A	9/1997	Morales
5,711,715	A	1/1998	Ringo
5,759,101	A	6/1998	Won Kohom
5,761,606	A	6/1998	Wolzien
5,762,552	A	6/1998	Voung et al.
5,764,275	A	6/1998	Lappington et al.
5,794,210	A	8/1998	Goldhaber et al.
5,805,230	A	9/1998	Staron
5,813,913	A	9/1998	Berner et al.
5,818,438	A	10/1998	Howe et al.
5,828,843	A	10/1998	Grimm
5,838,774	A	11/1998	Weiser, Jr.
5,838,909	A	11/1998	Roy
5,846,132	A	12/1998	Junkin
5,848,397	A	12/1998	Marsh et al.
5,860,862	A	1/1999	Junkin
5,882,260	A	3/1999	Marks
5,894,556	A	4/1999	Grimm
5,916,024	A	6/1999	Von Kohom
5,870,683	A	9/1999	Wells et al.
5,970,143	A	10/1999	Schneier et al.
5,971,854	A	10/1999	Pearson et al.
5,987,440	A	11/1999	O'Neil et al.
6,009,458	A	12/1999	Hawkins et al.
6,016,337	A	1/2000	Pykalisto
6,038,599	A	3/2000	Black
6,042,477	A	3/2000	Addink
6,015,344	A	4/2000	Kelly et al.
6,064,449	A	5/2000	White
6,104,815	A	8/2000	Alcorn et al.
6,110,041	A	8/2000	Walker et al.
6,117,013	A	9/2000	Elba
6,126,543	A	10/2000	Friedman
6,128,660	A	10/2000	Grimm
6,135,881	A	10/2000	Abbott et al.
6,154,131	A	11/2000	Jones, II
6,174,237	B1	1/2001	Stephenson
6,182,084	B1	1/2001	Cockrell et al.
6,193,610	B1	2/2001	Junkin
6,222,642	B1	4/2001	Farrell et al.
6,233,736	B1	5/2001	Wolzien
6,251,017	B1	6/2001	Leason et al.
6,264,650	B1	7/2001	Goldberg
6,267,670	B1	7/2001	Walker
6,287,199	B1	9/2001	McKeown et al.
6,293,868	B1	9/2001	Bernard
6,312,336	B1	11/2001	Handelman et al.
6,343,320	B1	1/2002	Fairchild
6,345,297	B1	2/2002	Grimm
6,371,855	B1	4/2002	Gavriloff
6,373,462	B1	4/2002	Pan
6,411,969	B1	6/2002	Tam
6,416,414	B1	7/2002	Stadelmann
6,418,298	B1	7/2002	Sonnenfeld
6,425,828	B2	7/2002	Walker et al.
6,434,398	B1	8/2002	Inselberg
6,446,262	B1	9/2002	Malaure et al.
6,470,180	B1	10/2002	Kotzin et al.
6,475,090	B2	11/2002	Gregory
6,524,189	B1	2/2003	Rautila
6,527,641	B1	3/2003	Sinclair et al.
6,530,082	B1	3/2003	Del Sesto et al.

(56) **References Cited**

U.S. PATENT DOCUMENTS

6,536,037 B1 3/2003 Guheen et al.
6,537,150 B1 3/2003 Luciano
6,578,068 B1 6/2003 Bowma-Amuah
6,594,098 B1 7/2003 Sutardja
6,604,997 B2 7/2003 Saidakovsky et al.
6,610,953 B1 8/2003 Tao et al.
6,611,755 B1 8/2003 Coffee
6,648,760 B1 11/2003 Nicastro
6,659,860 B1 12/2003 Yamamoto et al.
6,659,861 B1 12/2003 Faris
6,659,872 B1 12/2003 Kaufman et al.
6,690,661 B1 2/2004 Agarwal et al.
6,697,869 B1 2/2004 Mallart
6,718,350 B1 4/2004 Karbowski
6,752,396 B2 6/2004 Smith
6,758,754 B1 7/2004 Lavanchy et al.
6,758,755 B2 7/2004 Kelly et al.
6,760,595 B2 7/2004 Insellberg
6,763,377 B1 7/2004 Balknap et al.
6,766,524 B1 7/2004 Matheny et al.
6,774,926 B1 8/2004 Ellis et al.
6,785,561 B1 8/2004 Kim
6,801,380 B1 10/2004 Saturdja
6,806,889 B1 10/2004 Malaure et al.
6,807,675 B1 10/2004 Millard et al.
6,811,482 B2 11/2004 Letovsky
6,811,487 B2 11/2004 Sengoku
6,816,628 B1 11/2004 Sarachik et al.
6,817,947 B2 11/2004 Tanskanen
6,824,469 B2 11/2004 Allibhoy et al.
6,837,789 B2 1/2005 Garahi et al.
6,837,791 B1 1/2005 McNutt et al.
6,840,861 B2 1/2005 Jordan et al.
6,845,389 B1 1/2005 Sen
6,846,239 B2 1/2005 Washio
6,857,122 B1 2/2005 Takeda et al.
6,863,610 B2 3/2005 Vancraeynest
6,870,720 B2 3/2005 Iwata et al.
6,871,226 B1 3/2005 Ensley et al.
6,873,610 B1 3/2005 Noever
6,884,166 B2 4/2005 Leen et al.
6,884,172 B1 4/2005 Lloyd et al.
6,887,159 B2 5/2005 Leen et al.
6,888,929 B1 5/2005 Saylor
6,893,347 B1 5/2005 Zilliacus et al.
6,898,762 B2 5/2005 Ellis et al.
6,899,628 B2 5/2005 Leen et al.
6,903,681 B2 6/2005 Faris
6,908,389 B1 6/2005 Puskala
6,942,574 B1 9/2005 LeMay et al.
6,944,228 B1 9/2005 Dakss et al.
6,960,088 B1 11/2005 Long
6,978,053 B1 12/2005 Sarachik et al.
7,001,279 B1 2/2006 Barber et al.
7,029,394 B2 4/2006 Leen et al.
7,035,626 B1 4/2006 Luciano, Jr.
7,035,653 B2 4/2006 Simon et al.
7,058,592 B1 6/2006 Heckerman et al.
7,076,434 B1 7/2006 Newman et al.
7,085,552 B2 8/2006 Buckley
7,116,310 B1 10/2006 Evans et al.
7,117,517 B1 10/2006 Milazzo et al.
7,120,924 B1 10/2006 Katcher et al.
7,124,410 B2 10/2006 Berg
7,125,336 B2 10/2006 Anttila et al.
7,136,871 B2 11/2006 Ozer et al.
7,144,011 B2 12/2006 Asher et al.
7,169,050 B1 1/2007 Tyler
7,185,355 B1 2/2007 Ellis
7,187,658 B2 3/2007 Koyanagi
7,191,447 B1 3/2007 Ellis et al.
7,192,352 B2 3/2007 Walker et al.
7,194,758 B1 3/2007 Waki et al.
7,228,349 B2 6/2007 Barone, Jr. et al.
7,231,630 B2 6/2007 Acott et al.
7,233,922 B2 6/2007 Asher et al.
7,240,093 B1 7/2007 Danieli et al.
7,244,181 B2 7/2007 Wang et al.
7,249,367 B2 7/2007 Bove, Jr. et al.
7,254,605 B1 8/2007 Strum
7,260,782 B2 8/2007 Wallace et al.
RE39,818 E 9/2007 Slifer
7,283,830 B2 10/2007 Buckley
7,288,027 B2 10/2007 Overton
7,341,517 B2 3/2008 Asher et al.
7,343,617 B1 3/2008 Kartcher et al.
7,347,781 B2 3/2008 Schultz
7,351,149 B1 4/2008 Simon et al.
7,367,042 B1 4/2008 Dakss et al.
7,379,705 B1 5/2008 Rados et al.
7,389,144 B1 6/2008 Osorio
7,430,718 B2 9/2008 Gariepy-Viles
7,452,273 B2 11/2008 Amaitis et al.
7,460,037 B2 12/2008 Cattone et al.
7,461,067 B2 12/2008 Dewing et al.
7,502,610 B2 3/2009 Maher
7,510,474 B2 3/2009 Carter, Sr.
7,517,282 B1 4/2009 Pryor
7,534,169 B2 5/2009 Amaitis et al.
7,543,052 B1 6/2009 Cesa Klein
7,562,134 B1 7/2009 Fingerhut et al.
7,602,808 B2 10/2009 Ullmann
7,610,330 B1 10/2009 Quinn
7,614,944 B1 11/2009 Hughes et al.
7,630,986 B1 12/2009 Herz et al.
7,693,781 B2 4/2010 Asher et al.
7,699,707 B2 4/2010 Bahou
7,702,723 B2 4/2010 Dyl
7,711,628 B2 5/2010 Davie et al.
7,729,286 B2 6/2010 Mishra
7,753,772 B1 7/2010 Walker
7,753,789 B2 7/2010 Walker et al.
7,780,528 B2 8/2010 Hirayama
7,828,661 B1 11/2010 Fish
7,835,961 B2 11/2010 Davie et al.
7,860,993 B2 12/2010 Chintala
7,886,003 B2 2/2011 Newman
7,907,211 B2 3/2011 Oostveen et al.
7,907,598 B2 3/2011 Anisimov
7,909,332 B2 3/2011 Root
7,925,756 B1 4/2011 Riddle
7,926,810 B2 4/2011 Fisher et al.
7,937,318 B2 5/2011 Davie et al.
7,941,482 B2 5/2011 Bates
7,941,804 B1 5/2011 Herington
7,951,002 B1 5/2011 Brosnan
7,976,389 B2 7/2011 Cannon et al.
8,002,618 B1 8/2011 Lockton
8,006,314 B2 8/2011 Wold
8,025,565 B2 9/2011 Leen et al.
8,028,315 B1 9/2011 Barber
8,082,150 B2 12/2011 Wold
8,086,445 B2 12/2011 Wold et al.
8,086,510 B2 12/2011 Amaitis et al.
8,092,303 B2 1/2012 Amaitis et al.
8,092,306 B2 1/2012 Root
8,105,141 B2 1/2012 Leen et al.
8,107,674 B2 1/2012 Davis et al.
8,109,827 B2 2/2012 Cahill et al.
8,128,474 B2 3/2012 Amaitis et al.
8,147,313 B2 4/2012 Amaitis et al.
8,147,373 B2 4/2012 Amaitis et al.
8,149,530 B1 4/2012 Lockton et al.
8,155,637 B2 4/2012 Fujisawa
8,162,759 B2 4/2012 Yamaguchi
8,176,518 B1 5/2012 Junkin et al.
8,186,682 B2 5/2012 Amaitis et al.
8,204,808 B2 6/2012 Amaitis et al.
8,219,617 B2 7/2012 Ashida
8,240,669 B2 8/2012 Asher et al.
8,246,048 B2 8/2012 Asher et al.
8,267,403 B2 9/2012 Fisher et al.
8,342,924 B2 1/2013 Leen et al.
8,342,942 B2 1/2013 Amaitis et al.

(56) **References Cited**

U.S. PATENT DOCUMENTS

8,353,763 B2 1/2013 Amaitis et al.
8,376,855 B2 2/2013 Lockton et al.
8,396,001 B2 3/2013 Jung
8,397,257 B1 3/2013 Barber
8,465,021 B2 6/2013 Asher et al.
8,473,393 B2 6/2013 Davie et al.
8,474,819 B2 7/2013 Asher et al.
8,535,138 B2 9/2013 Amaitis et al.
8,538,563 B1 9/2013 Barber
8,543,487 B2 9/2013 Asher et al.
8,555,313 B2 10/2013 Newman
8,556,691 B2 10/2013 Leen et al.
8,585,490 B2 11/2013 Amaitis et al.
8,597,117 B2 12/2013 Bruce
8,622,798 B2 1/2014 Lockton et al.
8,632,392 B2 1/2014 Shore et al.
8,634,943 B2 1/2014 Root
8,638,517 B2 1/2014 Lockton et al.
8,641,511 B2 2/2014 Ginsberg et al.
8,659,848 B2 2/2014 Lockton et al.
8,672,751 B2 3/2014 Leen et al.
8,699,168 B2 4/2014 Lockton et al.
8,705,195 B2 4/2014 Lockton
8,708,789 B2 4/2014 Asher et al.
8,717,701 B2 5/2014 Lockton et al.
8,727,352 B2 5/2014 Amaitis et al.
8,734,227 B2 5/2014 Leen et al.
8,737,004 B2 5/2014 Lockton et al.
8,738,694 B2 5/2014 Huske et al.
8,771,058 B2 7/2014 Alderucci et al.
8,780,482 B2 7/2014 Lockton et al.
8,805,732 B2 8/2014 Davie et al.
8,813,112 B1 8/2014 Cibula et al.
8,814,664 B2 8/2014 Amaitis et al.
8,817,408 B2 8/2014 Lockton et al.
8,837,072 B2 9/2014 Lockton et al.
8,849,225 B1 9/2014 Choti
8,849,255 B2 9/2014 Choti
8,858,313 B1 10/2014 Selfors
8,870,639 B2 10/2014 Lockton et al.
8,935,715 B2 1/2015 Cibula et al.
9,056,251 B2 * 6/2015 Lockton G07F 17/3276
9,067,143 B2 * 6/2015 Lockton G07F 17/3295
9,069,651 B2 6/2015 Barber
9,076,303 B1 7/2015 Park
9,098,883 B2 8/2015 Asher et al.
9,111,417 B2 8/2015 Leen et al.
9,205,339 B2 12/2015 Cibula et al.
9,233,293 B2 1/2016 Lockton
9,258,601 B2 2/2016 Lockton et al.
9,270,789 B2 2/2016 Huske et al.
9,289,692 B2 3/2016 Barber
9,306,952 B2 4/2016 Burman et al.
9,314,686 B2 4/2016 Lockton
9,314,701 B2 4/2016 Lockton et al.
9,355,518 B2 5/2016 Amaitis et al.
9,406,189 B2 8/2016 Scott et al.
9,430,901 B2 8/2016 Amaitis et al.
9,457,272 B2 10/2016 Lockton et al.
9,498,724 B2 11/2016 Lockton et al.
9,501,904 B2 11/2016 Lockton
9,504,922 B2 11/2016 Lockton et al.
9,511,287 B2 12/2016 Lockton et al.
9,526,991 B2 12/2016 Lockton et al.
9,536,396 B2 1/2017 Amaitis et al.
9,556,991 B2 1/2017 Furuya
9,604,140 B2 3/2017 Lockton et al.
9,652,937 B2 5/2017 Lockton
9,662,576 B2 5/2017 Lockton et al.
9,662,577 B2 5/2017 Lockton et al.
9,672,692 B2 6/2017 Lockton
9,687,738 B2 6/2017 Lockton et al.
9,687,739 B2 6/2017 Lockton et al.
9,707,482 B2 7/2017 Lockton et al.
9,716,918 B1 7/2017 Lockton et al.
9,724,603 B2 8/2017 Lockton et al.
9,744,453 B2 8/2017 Lockton et al.
9,805,549 B2 10/2017 Asher et al.
9,821,233 B2 11/2017 Lockton et al.
9,878,243 B2 1/2018 Lockton et al.
9,881,337 B2 1/2018 Jaycobs et al.
9,901,820 B2 2/2018 Lockton et al.
9,908,053 B2 3/2018 Lockton et al.
9,919,210 B2 3/2018 Lockton
9,919,211 B2 3/2018 Lockton et al.
9,919,221 B2 3/2018 Lockton et al.
9,978,217 B2 5/2018 Lockton
9,993,730 B2 6/2018 Lockton et al.
9,999,834 B2 6/2018 Lockton et al.
10,052,557 B2 8/2018 Lockton et al.
10,089,815 B2 10/2018 Asher et al.
10,096,210 B2 10/2018 Amaitis et al.
10,137,369 B2 11/2018 Lockton et al.
10,150,031 B2 12/2018 Lockton et al.
10,165,339 B2 12/2018 Huske et al.
10,186,116 B2 1/2019 Lockton
10,195,526 B2 2/2019 Lockton et al.
10,226,698 B1 3/2019 Lockton et al.
10,226,705 B2 3/2019 Lockton et al.
10,232,270 B2 3/2019 Lockton et al.
10,248,290 B2 4/2019 Galfond
10,279,253 B2 5/2019 Lockton
10,360,767 B2 7/2019 Russell et al.
10,410,474 B2 9/2019 Lockton
10,438,451 B2 10/2019 Amaitis
10,569,175 B2 2/2020 Kosai et al.
10,593,157 B2 3/2020 Simons
10,653,955 B2 5/2020 Lockton
10,695,672 B2 6/2020 Lockton et al.
10,709,987 B2 7/2020 Lockton et al.
10,721,543 B2 7/2020 Huske et al.
10,825,294 B2 11/2020 Katz
10,937,279 B1 3/2021 Workman
10,981,070 B2 4/2021 Isgreen
11,077,366 B2 8/2021 Lockton
11,082,746 B2 8/2021 Lockton
11,083,965 B2 8/2021 Lockton
11,154,775 B2 10/2021 Lockton
11,179,632 B2 11/2021 Lockton
11,185,770 B2 11/2021 Lockton
2001/0004609 A1 6/2001 Walker et al.
2001/0005670 A1 6/2001 Lahtinen
2001/0013067 A1 8/2001 Koyanagi
2001/0013125 A1 8/2001 Kitsukawa et al.
2001/0020298 A1 9/2001 Rector, Jr. et al.
2001/0032333 A1 10/2001 Flickinger
2001/0036272 A1 11/2001 Hirayama
2001/0036853 A1 11/2001 Thomas
2001/0044339 A1 11/2001 Cordero
2001/0054019 A1 12/2001 de Fabrega
2002/0010789 A1 1/2002 Lord
2002/0018477 A1 2/2002 Katz
2002/0026321 A1 2/2002 Faris
2002/0029381 A1 3/2002 Inselberg
2002/0035609 A1 3/2002 Lessard
2002/0037766 A1 3/2002 Muniz
2002/0069265 A1 3/2002 Bountour
2002/0042293 A1 4/2002 Ubale et al.
2002/0046099 A1 4/2002 Frengut et al.
2002/0054088 A1 5/2002 Tanskanen et al.
2002/0055385 A1 5/2002 Otsu
2002/0056089 A1 5/2002 Houston
2002/0059094 A1 5/2002 Hosea et al.
2002/0059623 A1 5/2002 Rodriguez et al.
2002/0069076 A1 6/2002 Faris
2002/0076084 A1 6/2002 Tian
2002/0078176 A1 6/2002 Nomura et al.
2002/0083461 A1 6/2002 Hutcheson
2002/0091833 A1 7/2002 Grimm
2002/0094869 A1 7/2002 Harkham
2002/0095333 A1 7/2002 Jokinen et al.
2002/0097983 A1 7/2002 Wallace et al.
2002/0099709 A1 7/2002 Wallace
2002/0100063 A1 7/2002 Herigstad et al.

(56) **References Cited**

U.S. PATENT DOCUMENTS

2002/0103696 A1 8/2002 Huang et al.
2002/0105535 A1 8/2002 Wallace et al.
2002/0107073 A1 8/2002 Binney
2002/0108112 A1 8/2002 Wallace et al.
2002/0108125 A1 8/2002 Joao
2002/0108127 A1 8/2002 Lew et al.
2002/0112249 A1 8/2002 Hendricks et al.
2002/0115488 A1 8/2002 Berry et al.
2002/0119821 A1 8/2002 Sen
2002/0120930 A1 8/2002 Yona
2002/0124247 A1 9/2002 Houghton
2002/0132614 A1 9/2002 Vanlujit et al.
2002/0133817 A1 9/2002 Markel
2002/0133827 A1 9/2002 Newman et al.
2002/0142843 A1 10/2002 Roelofs
2002/0144273 A1 10/2002 Reto
2002/0147049 A1 10/2002 Carter, Sr.
2002/0157002 A1 10/2002 Messerges et al.
2002/0157005 A1 10/2002 Bunk
2002/0159576 A1 10/2002 Adams
2002/0162031 A1 10/2002 Levin et al.
2002/0162117 A1 10/2002 Pearson
2002/0165020 A1 11/2002 Koyama
2002/0165025 A1 11/2002 Kawahara
2002/0177483 A1 11/2002 Cannon
2002/0184624 A1 12/2002 Spencer
2002/0187825 A1 12/2002 Tracy
2002/0198050 A1 12/2002 Patchen
2003/0002638 A1 1/2003 Kaars
2003/0003997 A1 1/2003 Vuong et al.
2003/0013528 A1 1/2003 Allibhoy et al.
2003/0023547 A1 1/2003 France
2003/0040363 A1 2/2003 Sandberg
2003/0054885 A1 3/2003 Pinto et al.
2003/0060247 A1 3/2003 Goldberg et al.
2003/0066089 A1 4/2003 Anderson
2003/0069828 A1 4/2003 Blazey et al.
2003/0070174 A1 4/2003 Solomon
2003/0078924 A1 4/2003 Liechty et al.
2003/0086691 A1 5/2003 Yu
2003/0087652 A1 5/2003 Simon et al.
2003/0088648 A1 5/2003 Bellaton
2003/0088878 A1 5/2003 Rogers
2003/0114224 A1 6/2003 Anttila et al.
2003/0115152 A1 6/2003 Flaherty
2003/0125109 A1 7/2003 Green
2003/0134678 A1 7/2003 Tanaka
2003/0144017 A1 7/2003 Inselberg
2003/0154242 A1 8/2003 Hayes et al.
2003/0165241 A1 9/2003 Fransdonk
2003/0177167 A1 9/2003 Afage et al.
2003/0177504 A1 9/2003 Paulo et al.
2003/0189668 A1 10/2003 Newman et al.
2003/0195023 A1 10/2003 Di Cesare
2003/0195807 A1 10/2003 Maggio
2003/0208579 A1 11/2003 Brady et al.
2003/0211856 A1 11/2003 Zilliacus
2003/0212691 A1 11/2003 Kuntala et al.
2003/0216185 A1 11/2003 Varley
2003/0216857 A1 11/2003 Feldman et al.
2003/0228866 A1 12/2003 Pezeshki
2003/0233425 A1 12/2003 Lyons et al.
2004/0005919 A1 1/2004 Walker et al.
2004/0014524 A1 1/2004 Pearlman
2004/0015442 A1 1/2004 Hmlinen
2004/0022366 A1 2/2004 Ferguson et al.
2004/0025190 A1 2/2004 McCalla
2004/0056897 A1 3/2004 Ueda
2004/0060063 A1 3/2004 Russ et al.
2004/0073915 A1 4/2004 Dureau
2004/0088729 A1 5/2004 Petrovic et al.
2004/0093302 A1 5/2004 Baker et al.
2004/0152454 A1 5/2004 Kauppinen
2004/0107138 A1 6/2004 Maggio
2004/0117831 A1 6/2004 Ellis et al.
2004/0117839 A1 6/2004 Watson et al.
2004/0128319 A1 7/2004 Davis et al.
2004/0139158 A1 7/2004 Datta
2004/0139482 A1 7/2004 Hale
2004/0148638 A1 7/2004 Weisman et al.
2004/0152517 A1 8/2004 Haedisty
2004/0152519 A1 8/2004 Wang
2004/0158855 A1 8/2004 Gu et al.
2004/0162124 A1 8/2004 Barton
2004/0166873 A1 8/2004 Simic
2004/0176162 A1 9/2004 Rothschild
2004/0178923 A1 9/2004 Kuang
2004/0183824 A1 9/2004 Benson
2004/0185881 A1 9/2004 Lee
2004/0190779 A1 9/2004 Sarachik et al.
2004/0198495 A1 10/2004 Cisneros et al.
2004/0201626 A1 10/2004 Lavoie
2004/0203667 A1 10/2004 Shroder
2004/0203898 A1 10/2004 Bodin et al.
2004/0210507 A1 10/2004 Asher et al.
2004/0215756 A1 10/2004 VanAntwerp
2004/0216161 A1 10/2004 Barone, Jr. et al.
2004/0216171 A1 10/2004 Barone, Jr. et al.
2004/0224750 A1 11/2004 Ai-Ziyoud
2004/0242321 A1 12/2004 Overton
2004/0266513 A1 12/2004 Odom
2005/0005303 A1 1/2005 Barone, Jr. et al.
2005/0021942 A1 1/2005 Diehl et al.
2005/0026699 A1 2/2005 Kinzer et al.
2005/0028208 A1 2/2005 Ellis
2005/0043094 A1 2/2005 Nguyen et al.
2005/0076371 A1 4/2005 Nakamura
2005/0077997 A1 4/2005 Landram
2005/0060219 A1 5/2005 Ditering et al.
2005/0097599 A1 5/2005 Potnick et al.
2005/0101309 A1 5/2005 Croome
2005/0113164 A1 5/2005 Buecheler et al.
2005/0003878 A1 6/2005 Updike
2005/0116416 A1 6/2005 Peterson
2005/0131984 A1 6/2005 Hofmann et al.
2005/0138668 A1 6/2005 Gray et al.
2005/0144102 A1 6/2005 Johnson
2005/0155083 A1 7/2005 Oh
2005/0177861 A1 8/2005 Ma et al.
2005/0210526 A1 9/2005 Levy et al.
2005/0216838 A1 9/2005 Graham
2005/0235043 A1 10/2005 Teodosiu et al.
2005/0239551 A1 10/2005 Griswold
2005/0255901 A1 11/2005 Kreutzer
2005/0256895 A1 11/2005 Dussault
2005/0266869 A1 12/2005 Jung
2005/0267969 A1 12/2005 Poikselka et al.
2005/0273804 A1 12/2005 Preisman
2005/0283800 A1 12/2005 Ellis et al.
2005/0288080 A1 12/2005 Lockton et al.
2005/0288101 A1 12/2005 Lockton et al.
2005/0288812 A1 12/2005 Cheng
2006/0020700 A1 1/2006 Qiu
2006/0025070 A1 2/2006 Kim et al.
2006/0046810 A1 3/2006 Tabata
2006/0047772 A1 3/2006 Crutcher
2006/0053390 A1 3/2006 Gariepy-Viles
2006/0058103 A1 3/2006 Danieli
2006/0059161 A1 3/2006 Millett et al.
2006/0063590 A1 3/2006 Abassi et al.
2006/0082068 A1 4/2006 Patchen
2006/0087585 A1 4/2006 Seo
2006/0089199 A1 4/2006 Jordan et al.
2006/0094409 A1 5/2006 Inselberg
2006/0101492 A1 5/2006 Lowcock
2006/0111168 A1 5/2006 Nguyen
2006/0135253 A1 6/2006 George et al.
2006/0148569 A1 7/2006 Beck
2006/0156371 A1 7/2006 Maetz et al.
2006/0160597 A1 7/2006 Wright
2006/0174307 A1 8/2006 Hwang et al.
2006/0183547 A1 8/2006 McMonigle
2006/0183548 A1 8/2006 Morris et al.
2006/0190654 A1 8/2006 Joy

(56) **References Cited**

U.S. PATENT DOCUMENTS

2006/0205483 A1* 9/2006 Meyer G06Q 20/06 463/25
2006/0205509 A1 9/2006 Hirota
2006/0205510 A1 9/2006 Lauper
2006/0217198 A1 9/2006 Johnson
2006/0236352 A1 10/2006 Scott, III
2006/0248553 A1 11/2006 Mikkelson et al.
2006/0248564 A1 11/2006 Zinevitch
2006/0256865 A1 11/2006 Westerman
2006/0256868 A1 11/2006 Westerman
2006/0269120 A1 11/2006 Mehmadi et al.
2006/0285586 A1 12/2006 Westerman
2007/0004516 A1 1/2007 Jordan et al.
2007/0013547 A1 1/2007 Boaz
2007/0019826 A1 1/2007 Horbach et al.
2007/0028272 A1 2/2007 Lockton
2007/0037623 A1 2/2007 Romik
2007/0054695 A1 3/2007 Huske et al.
2007/0078009 A1 4/2007 Lockton et al.
2007/0083920 A1 4/2007 Mizoguchi et al.
2007/0086465 A1 4/2007 Paila et al.
2007/0087832 A1 4/2007 Abbott
2007/0093296 A1 4/2007 Asher
2007/0106721 A1 5/2007 Schloter
2007/0107010 A1 5/2007 Jolna et al.
2007/0129144 A1 6/2007 Katz
2007/0147870 A1 7/2007 Nagashima et al.
2007/0162328 A1 7/2007 Reich
2007/0183744 A1 8/2007 Koizumi
2007/0197247 A1 8/2007 Inselberg
2007/0210908 A1 9/2007 Putterman et al.
2007/0219856 A1 9/2007 Ahmad-Taylor
2007/0222652 A1 9/2007 Cattone et al.
2007/0226062 A1 9/2007 Hughes et al.
2007/0238525 A1 10/2007 Suomela
2007/0243936 A1 10/2007 Binenstock et al.
2007/0244570 A1 10/2007 Speiser et al.
2007/0244585 A1 10/2007 Speiser et al.
2007/0244749 A1 10/2007 Speiser et al.
2007/0265089 A1 11/2007 Robarts
2007/0294410 A1 12/2007 Pandya
2008/0005037 A1 1/2008 Hammad
2008/0013927 A1 1/2008 Kelly et al.
2008/0051201 A1 2/2008 Lore
2008/0066129 A1 3/2008 Katcher et al.
2008/0076497 A1 3/2008 Kiskis et al.
2008/0104630 A1 5/2008 Bruce
2008/0146337 A1 6/2008 Halonen
2008/0169605 A1 7/2008 Shuster et al.
2008/0222672 A1 9/2008 Piesing
2008/0240681 A1 10/2008 Fukushima
2008/0248865 A1 10/2008 Tedesco
2008/0270288 A1 10/2008 Butterly et al.
2008/0288600 A1 11/2008 Clark
2008/0301741 A1 12/2008 Stern
2008/0315521 A1 12/2008 Reabe, Jr.
2009/0011781 A1 1/2009 Merrill et al.
2009/0094632 A1 4/2009 Newman et al.
2009/0103892 A1 4/2009 Hirayama
2009/0119151 A1 5/2009 de Heer
2009/0186676 A1 7/2009 Amaitis et al.
2009/0163271 A1 9/2009 George et al.
2009/0228351 A1 9/2009 Rijsenbrij
2009/0234674 A1 9/2009 Wurster
2009/0264188 A1 10/2009 Soukup
2009/0271512 A1 10/2009 Jorgensen
2009/0325716 A1 12/2009 Harari
2010/0099421 A1 4/2010 Patel et al.
2010/0099471 A1 4/2010 Feeney et al.
2010/0107194 A1 4/2010 McKissick et al.
2010/0120503 A1 5/2010 Hoffman et al.
2010/0137057 A1 6/2010 Fleming
2010/0203936 A1 8/2010 Levy
2010/0261533 A1 10/2010 Kryger
2010/0279764 A1 11/2010 Allen et al.
2010/0296511 A1 11/2010 Prodan
2011/0016224 A1 1/2011 Riley
2011/0053681 A1 3/2011 Goldman
2011/0065490 A1 3/2011 Lutnick
2011/0081958 A1 4/2011 Herman
2011/0116461 A1 5/2011 Holt
2011/0124397 A1 5/2011 Gingher
2011/0130197 A1 6/2011 Bythar et al.
2011/0227287 A1 9/2011 Reabe
2011/0269548 A1 11/2011 Barclay et al.
2011/0306428 A1 12/2011 Lockton et al.
2012/0058808 A1 3/2012 Lockton
2012/0115585 A1 5/2012 Goldman
2012/0157178 A1 6/2012 Lockton
2012/0264496 A1 10/2012 Behrman et al.
2012/0282995 A1 11/2012 Allen et al.
2012/0295686 A1 11/2012 Lockton
2013/0005453 A1 1/2013 Nguyen et al.
2013/0072271 A1 3/2013 Lockton et al.
2013/0079081 A1 3/2013 Lockton et al.
2013/0079092 A1 3/2013 Lockton et al.
2013/0079093 A1 3/2013 Lockton et al.
2013/0079135 A1 3/2013 Lockton et al.
2013/0079150 A1 3/2013 Lockton et al.
2013/0079151 A1 3/2013 Lockton et al.
2013/0196774 A1 8/2013 Lockton et al.
2013/0225285 A1 8/2013 Lockton
2013/0225299 A1 8/2013 Lockton
2014/0031134 A1 1/2014 Lockton et al.
2014/0100011 A1 4/2014 Gingher
2014/0106832 A1 4/2014 Lockton et al.
2014/0128139 A1 5/2014 Shuster et al.
2014/0155130 A1 6/2014 Lockton et al.
2014/0155134 A1 6/2014 Lockton
2014/0206446 A1 7/2014 Lockton et al.
2014/0237025 A1 8/2014 Huske et al.
2014/0248952 A1 9/2014 Cibula et al.
2014/0256432 A1 9/2014 Lockton et al.
2014/0279439 A1 9/2014 Brown
2014/0287832 A1 9/2014 Lockton et al.
2014/0309001 A1 10/2014 Root
2014/0335961 A1 11/2014 Lockton et al.
2014/0335962 A1 11/2014 Lockton et al.
2014/0378212 A1 12/2014 Sims
2015/0011310 A1 1/2015 Lockton et al.
2015/0024814 A1 1/2015 Root
2015/0067732 A1 3/2015 Howe et al.
2015/0148130 A1 5/2015 Cibula et al.
2015/0238839 A1 8/2015 Lockton
2015/0238873 A1 8/2015 Arnone et al.
2015/0258452 A1 9/2015 Lockton et al.
2015/0356831 A1 12/2015 Osibodu
2016/0023116 A1 1/2016 Wire
2016/0045824 A1 2/2016 Lockton et al.
2016/0049049 A1 2/2016 Lockton
2016/0054872 A1 2/2016 Cibula et al.
2016/0082357 A1 3/2016 Lockton
2016/0121208 A1 5/2016 Lockton et al.
2016/0134947 A1 5/2016 Huske et al.
2016/0217653 A1 7/2016 Meyer
2016/0220908 A1 8/2016 Isgreen
2016/0271501 A1 9/2016 Balsbaugh
2016/0361647 A1 12/2016 Lockton et al.
2016/0375362 A1 12/2016 Lockton et al.
2017/0036110 A1 2/2017 Lockton et al.
2017/0036117 A1 2/2017 Lockton et al.
2017/0043259 A1 2/2017 Lockton et al.
2017/0053498 A1 2/2017 Lockton
2017/0065891 A1 3/2017 Lockton et al.
2017/0098348 A1 4/2017 Odom
2017/0103615 A1 4/2017 Theodospoulos
2017/0128840 A1 5/2017 Croci
2017/0221314 A1 8/2017 Lockton
2017/0225071 A1 8/2017 Lockton et al.
2017/0225072 A1 8/2017 Lockton et al.
2017/0232340 A1 8/2017 Lockton
2017/0243438 A1 8/2017 Merati
2017/0249801 A1 8/2017 Malek
2017/0252649 A1 9/2017 Lockton et al.

(56) **References Cited**

U.S. PATENT DOCUMENTS

2017/0259173	A1	9/2017	Lockton et al.
2017/0264961	A1	9/2017	Lockton
2017/0282067	A1	10/2017	Lockton et al.
2017/0296916	A1	10/2017	Lockton et al.
2017/0304726	A1	10/2017	Lockton et al.
2017/0345260	A1	11/2017	Strause
2018/0001213	A1	1/2018	Tsang
2018/0025586	A1	1/2018	Lockton
2018/0071637	A1	3/2018	Baazov
2018/0104582	A1	4/2018	Lockton et al.
2018/0104596	A1	4/2018	Lockton et al.
2018/0117464	A1	5/2018	Lockton et al.
2018/0140955	A1	5/2018	Lockton et al.
2018/0154255	A1	6/2018	Lockton
2018/0169523	A1	6/2018	Lockton et al.
2018/0190077	A1	7/2018	Hall
2018/0236359	A1	8/2018	Lockton et al.
2018/0243652	A1	8/2018	Lockton et al.
2018/0264360	A1	9/2018	Lockton et al.
2018/0300988	A1	10/2018	Lockton
2018/0318710	A1	11/2018	Lockton et al.
2019/0054375	A1	2/2019	Lockton et al.
2019/0060750	A1	2/2019	Lockton et al.
2019/0143225	A1	5/2019	Baazov
2019/0295382	A1	9/2019	Huke
2019/0304259	A1	10/2019	Joao
2020/0111325	A1	4/2020	Lockton
2021/0043036	A1	2/2021	Katz
2021/0099759	A1	4/2021	Armstrong
2021/0136456	A1	5/2021	Srinivasan
2021/0142620	A1	5/2021	Platis
2021/0260476	A1	8/2021	Lockton

FOREIGN PATENT DOCUMENTS

CA	2279069		7/1999
CA	2287617		10/1999
EP	0649102	A3	6/1996
GB	2364485		1/2002
JP	11-46356		2/1999
JP	11-239183		8/1999
JP	2000-165840		6/2000
JP	2000-217094		8/2000
JP	2000-358255		12/2000
JP	2001-28743		1/2001
JP	2000-209563		7/2008
NZ	330242		10/1989
WO	01039506	A2	5/2001
WO	01/65743	A1	9/2001
WO	02/03698	A1	10/2002
WO	2005064506	A1	7/2005
WO	2006004855		1/2006
WO	2006004856		1/2006
WO	2007002284		1/2007
WO	2007016575		2/2007
WO	2007041667		4/2007
WO	2008027811	A2	3/2008
WO	2008115858	A1	9/2008

OTHER PUBLICATIONS

"Modeling User Behavior in Networked Games byTristan Henderson and Saleem Bhatti", www.woodworm.cs.uml.edu/rprice/ep/henderson.

Pinnacle, "The basics of reverse line movement," Jan. 19, 2018, Retrieved on Jan. 22, 2020 , http://www.pinnacle.com/en/betting-articles educational/basics-of-reverse-line-movement/QAH26XGGQQS7M3GD.

Gambling Commission,"Virtual currencies, eSports and social casino gaming-position paper," Mar. 2017, Retrieved on Jan. 22, 2020, http://gamblingcomission.gov.uk/PDF/Virtual-currencies-eSports-and -social-casino-gaming.pdf.

Sipko et al.,"Machine learning for the prediction of professional tennis matches," In: MEng computing-final year project, Imperial College London, Jun. 15, 2015, http://www.doc.ic.ac.uk/teaching/distinguished-projects/2015/m.sipko.pdf.

Winview Game Producer, "Live TV Sports Play Along App WinView Games Announces Sponsorship With PepsiCo to Start This Holiday Season," In Winview Games. Dec. 21, 2016, Retrieved on Jan. 21, 2020 from , http://www. winviewgames./press-release/live-tv-sports-play-along-app-winview-games-announces-sponsorship-pepsico-start-holiday-season/.

The International Search Report and the Written Opinion for the PCT/US2019/054859 dated Feb. 4, 2020.

The International Preliminary Report dated Apr. 22, 2021 for the application PCT/US2019/054859.

Fantasy sport-Wikipedia.pdf, https://en.wikepedia.org/w/index.php?title=Fantasy_sport&oldid=685260969(Year 2015).

Two Way TV Patent and Filing Map www.twowaytv.com/version4/technologies/tech_patents.asp.

Ark 4.0 Standard Edition, Technical Overview www.twowaytv.com/version4/technologies/tech_ark_professionals.asp.

"Understanding the Interactivity Between Television and Mobile commerce", Robert Davis and David Yung, Communications of the ACM, Jul. 2005, vol. 48, No. 7, pp. 103-105.

"Re: Multicast Based Voting System" www.ripe.net/ripe/maillists/archives/mbone-eu-op/1997/msg00100html.

"IST and Sportal.com: Live on the Internet Sep. 14, 2004 by Clare Spoonheim", www.isk.co.usk/NEWS/dotcom/st_sportal.html.

"Modeling User Behavior in Networked Games byTristan Henderson and Saleem Bhatti", www.woodworm.cs.uml.edu/price/ep/henderson.

"SMS Based Voting and Survey System for Meetings", www.abbit.be/technology/SMSSURVEY.html.

"PurpleAce Launches 3GSM Ringtone Competition", www.wirelessdevnet.com/news/2005/jan/31/news6html.

"On the Perfomance of Protocols for collecting Responses over a Multiple-Access Channel", Mostafa H. Ammar and George N. Rouskas, IEEE Incomform '91, pp. 1490-1499, vol. 3, IEEE, New York, NY.

Merriam-Webster, "Game" definition, <http://www.merriam-webster.com/dictionary/agme.pg.1.

Ducheneaut et al., "The Social Side of Gaming: A Study of Interaction Patterns in a Massively Multiplayer Online Game", Palo Alto Research Center, Nov. 2004, vol. 6, Issue 4, pp. 360-369.

http://help.yahoo.com/help/us/tourn/tourn-03.html.

* cited by examiner

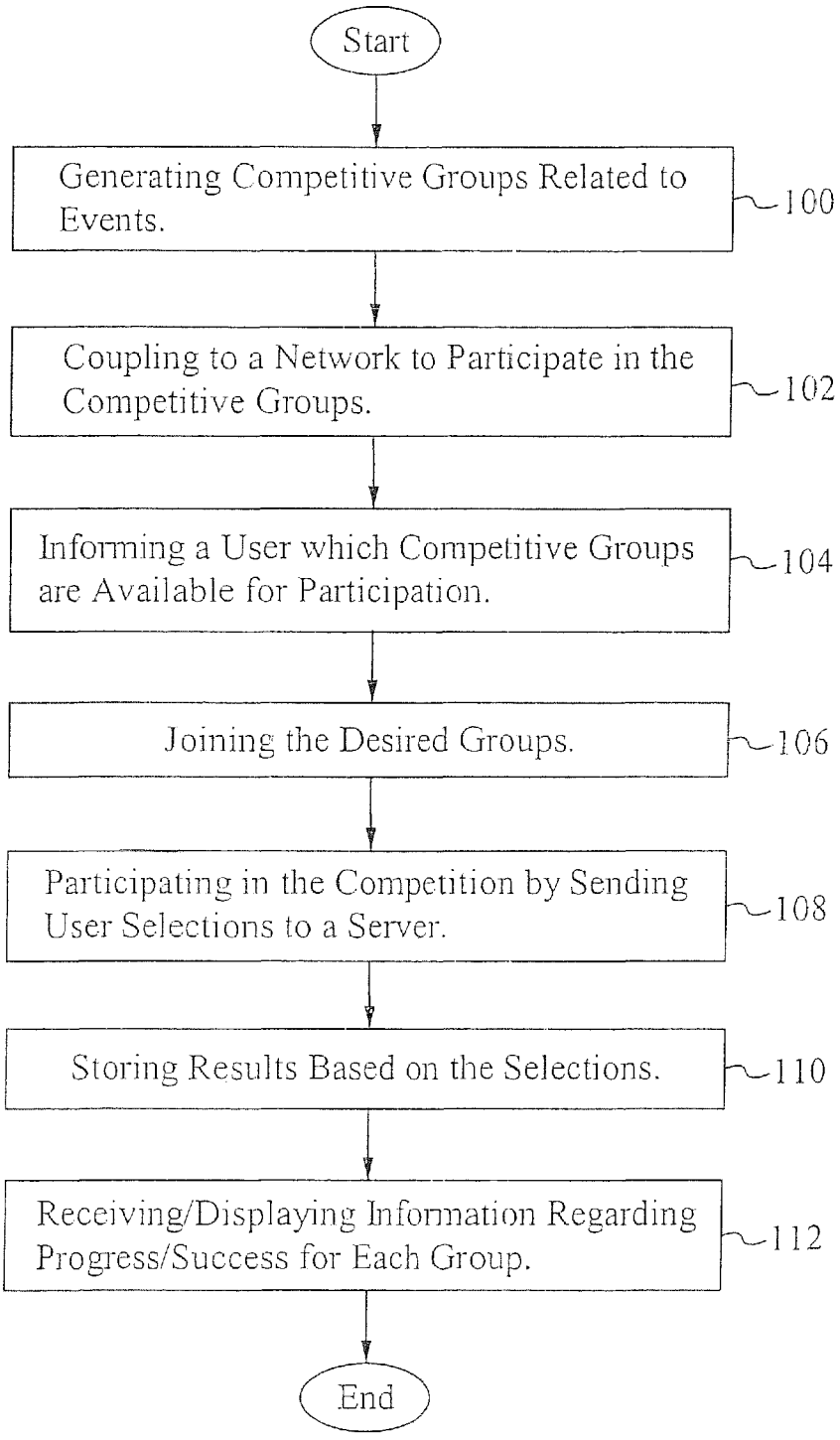

Start
Generating Competitive Groups Related to Events.
100
Coupling to a Network to Participate in the Competitive Groups.
102
Informing a User which Competitive Groups are Available for Participation.
104
Joining the Desired Groups.
106
Participating in the Competition by Sending User Selections to a Server.
108
Storing Results Based on the Selections.
110
Receiving/Displaying Information Regarding Progress/Success for Each Group.
112
End

Fig. 1

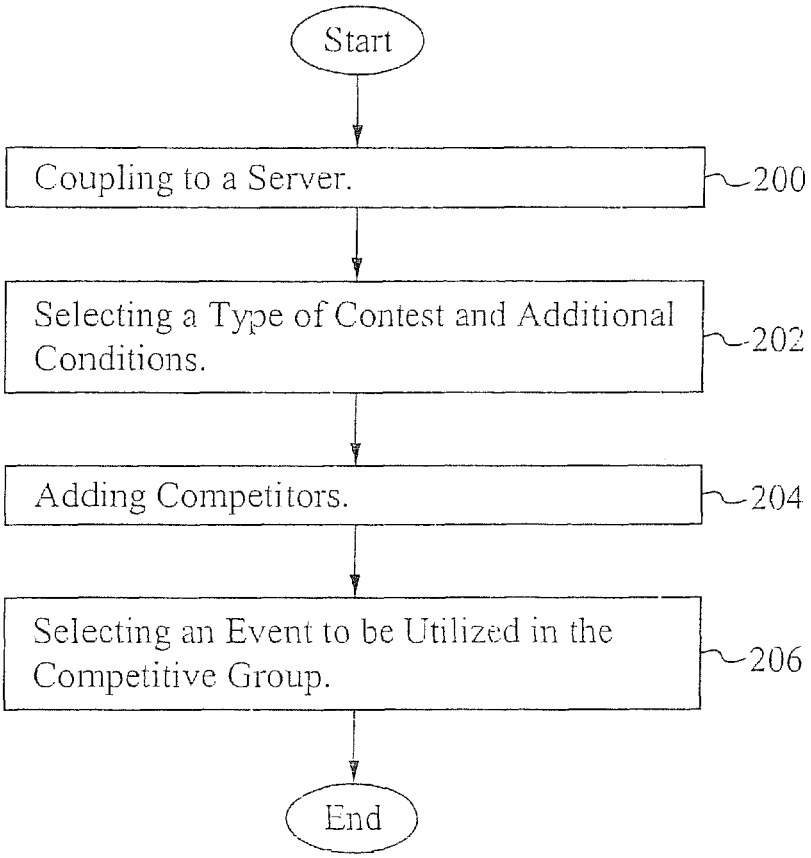

Start
Coupling to a Server.
200
Selecting a Type of Contest and Additional Conditions.
202
Adding Competitors.
204
Selecting an Event to be Utilized in the Competitive Group.
206
End

Fig. 2

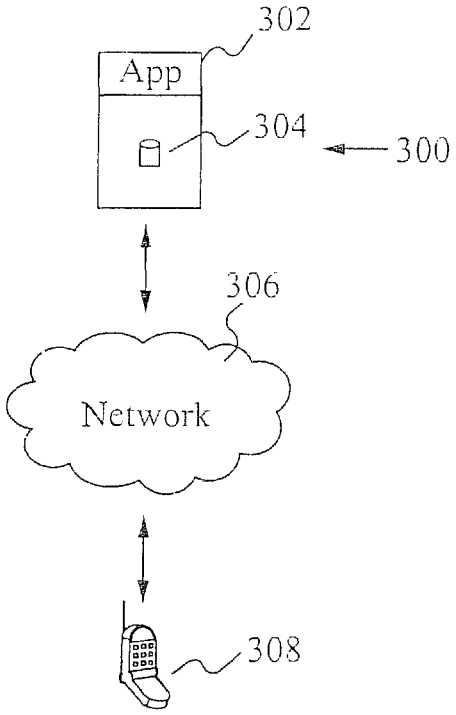

302
App
304
300
306
Network
308

Fig. 3

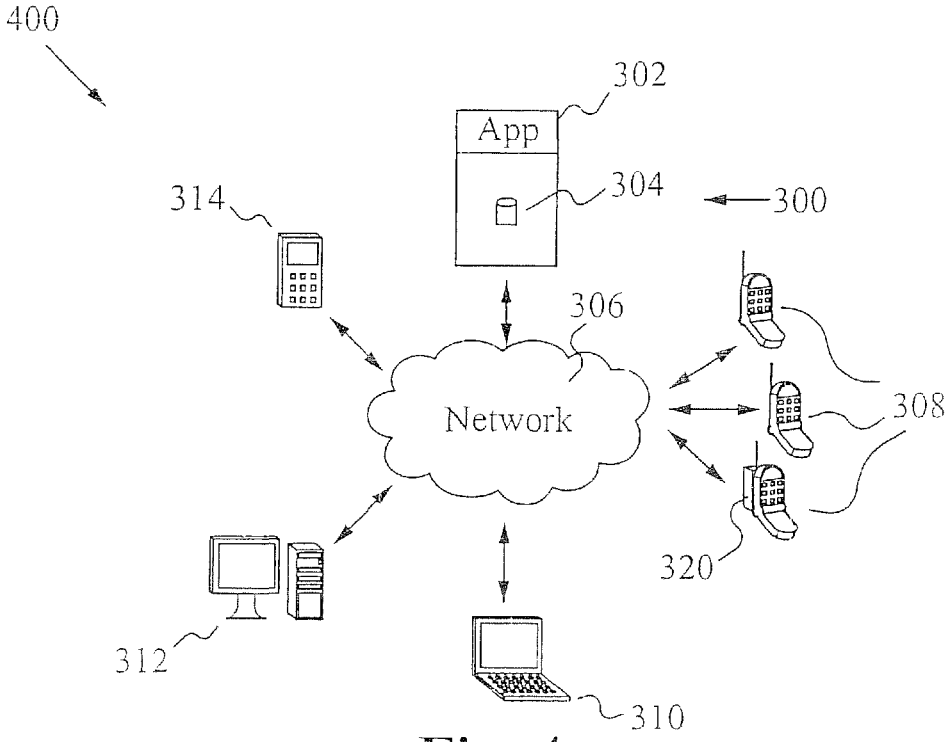

400
302
App
304
300
314
306
Network
308
320
312
310

Fig. 4

METHOD OF AND SYSTEM FOR CONDUCTING MULTIPLE CONTESTS OF SKILL WITH A SINGLE PERFORMANCE

RELATED APPLICATION(S)

This patent application is a continuation of co-pending U.S. patent application Ser. No. 16/934,886, filed on Jul. 21, 2020, titled "METHOD OF AND SYSTEM FOR CONDUCTING MULTIPLE CONTESTS OF SKILL WITH A SINGLE PERFORMANCE" which is a continuation of U.S. patent application Ser. No. 16/426,788, filed on May 30, 2019, titled "METHOD OF AND SYSTEM FOR CONDUCTING MULTIPLE CONTESTS OF SKILL WITH A SINGLE PERFORMANCE" which is a continuation of U.S. patent application Ser. No. 15/900,480, filed on Feb. 20, 2018, titled "METHOD OF AND SYSTEM FOR CONDUCTING MULTIPLE CONTESTS OF SKILL WITH A SINGLE PERFORMANCE" which is a continuation of co-pending U.S. patent application Ser. No. 15/296,983, filed on Oct. 18, 2016, titled "METHOD OF AND SYSTEM FOR CONDUCTING MULTIPLE CONTESTS OF SKILL WITH A SINGLE PERFORMANCE" which is a continuation of U.S. patent application Ser. No. 14/927,276, filed on Oct. 29, 2015, titled "METHOD OF AND SYSTEM FOR CONDUCTING MULTIPLE CONTESTS OF SKILL WITH A SINGLE PERFORMANCE" which is a continuation of U.S. patent application Ser. No. 14/723,363, filed on May 27, 2015, titled "METHOD OF AND SYSTEM FOR CONDUCTING MULTIPLE CONTESTS OF SKILL WITH A SINGLE PERFORMANCE" which is a continuation of U.S. patent application Ser. No. 14/044,173, filed on Oct. 2, 2013, titled "METHOD OF AND SYSTEM FOR CONDUCTING MULTIPLE CONTESTS OF SKILL WITH A SINGLE PERFORMANCE" which is a continuation of U.S. patent application Ser. No. 13/215,052, filed on Aug. 22, 2011, titled "METHOD OF AND SYSTEM FOR CONDUCTING MULTIPLE CONTESTS OF SKILL WITH A SINGLE PERFORMANCE" which is a continuation of U.S. patent application Ser. No. 11/652,240, filed on Jan. 10, 2007, titled "METHOD OF AND SYSTEM FOR CONDUCTING MULTIPLE CONTESTS OF SKILL WITH A SINGLE PERFORMANCE", now issued as U.S. Pat. No. 8,002,618, which claims priority under 35 U.S.C. § 119(e) of the co-owned U.S. Provisional Patent Application No. 60/757,960, filed Jan. 10, 2006, and entitled "METHODOLOGY FOR CONDUCTING MULTIPLE CONTESTS OF SKILL WITH A SINGLE PERFORMANCE," all of which are also hereby incorporated by reference in their entirety.

FIELD OF THE INVENTION

The present invention relates to the field of distributed gaming. More specifically, the present invention relates to the field of distributed gaming utilizing a mobile device.

BACKGROUND OF THE INVENTION

In the United States alone there are over 170 million registered cellular phones. With the expiration of the U.S. Pat. No. 4,592,546 to Fascenda and Lockton, companies are able to now use the cellular phone and other mobile communication devices utilizing a multicast network to control television viewers in games of skill based upon predicting, for example, what the quarterback may call on the next play within a football game. In addition, games of skill with a common start time can be conducted simultaneously among cellular phone owners, based on classic card, dice, trivia, and other games. In order to avoid the anti-gaming laws in the various states, the winners must be determined by the relative skill, experience and practice of the player in each discrete game.

U.S. Pat. No. 5,813,913 ('913) to Berner and Lockton provides for a central computing system which includes a means of grouping participants having similar skill levels together in simultaneous, but separate, levels of competition playing an identical game. The relative performances are communicated to only those participants competing at the same skill level. The '913 patent also provides for a wireless receiving device to permanently store the specific skill level for each participant for each type of common event such as those based on televised sports or game shows. The '913 patent provides for a telephonic link at the completion of the game to collect information and update the skill level of the participants of a particular game. When a person achieves sufficient points or meets other objective criteria to graduate into another skill level, a method is provided for accomplishing this in the central computer and then transmitting an alert to the participant notifying them of their promotion. The '913 patent describes awarding prizes and providing recognition for the members of each discreet skill level in a common game. All users, no matter what level they are on, receive the same number of questions and thus the possibility of earning the same number of points. Thus direct comparisons between users at different levels, although not encouraged are possible. Such comparisons between players of disparate skills can lead to user discouragement.

Games of skill and chance have an intrinsic excitement and entertainment value. Any game is greatly enhanced by a participant's ability to know how their performance compares in relation to other participants and/or to historical performance for the game throughout the contest. As with any game of skill, competition among friends, or with strangers of similar experience, or the ability at ones option, sometimes for an extra consideration, to compete in a separate team or individual contest, offers the opportunity of increased enjoyment and prizes.

SUMMARY OF THE INVENTION

A method of and system for conducting multiple competitions of skill for a single performance are described herein. User generated competition groups and system generated competition groups allow users to participate in multiple competitions at once based on answering the same questions or making the same selections related to a single event. The users are informed of the availability of each competition either via email, text message or when logging into the network via a website. The users select which competitions groups to join. After joining the desired groups, the users then make their selections related to the event which are transmitted to the network where results are tabulated and transmitted back to the users. The results are separated for each competition group, so that users continually know where they stand in each separate competition. With multiple competition groups, users are able to have varying success from the same performance in multiple competitions.

In one aspect, a method of participating in multiple contests of skill corresponding to an event comprises receiving a list of competitive groups to join, selecting a plurality of competitive groups to join, participating with the plurality of competitive groups by sending selections related to the

single event to a server and receiving standings on a device from the server, wherein the standings are based on results from the selections. The event is selected from the group consisting of a television-based sporting event, entertainment programming and a game show. Alternatively, the event comprises identical classic card, dice, trivia and word games played simultaneously. Receiving the standings on the device with the plurality of competitive groups occurs during the event. The results are separated based on the plurality of competitive groups. The standings are received periodically and represent performance in the competitive groups. The competitive groups are selected from the service provider generated competitive groups and/or user generated competitive groups. The service provider generated competitive groups are based on general playing characteristics. The list of competitive groups to join is received on the device selected from the user interface including a cellular phone, a laptop computer, a personal computer or a PDA. The competitive groups are maintained in a database. In some embodiments, the results include a handicap.

In another aspect, a method of conducting multiple contests of skill corresponding to an event comprises generating separate competitive groups related to the event, coupling to a network to participate in the competitive groups, informing a user which of the competitive groups are available for the user to join, joining a selected number of the competitive groups, participating with the competitive groups by sending selections related to the event to a server within the network, storing results and standings on the server, wherein the standings are based on the results and the results are based on the selections and transmitting the standings to a device. The method further comprises displaying the standings on the device. The server contains an application and a database for assisting in generating the competitive group. The application includes a graphical user interface. The device contains an application for assisting in generating the competitive group. Generating competitive groups related to the event further comprises coupling to the server, selecting a type of contest and additional conditions to be included in the competitive group, adding competitors to the competitive group and selecting the event for competition by the competitive group. The type of contest is selected from the group consisting of, for example, an open contest, a head-to-head contest and a team contest. Adding competitors to the competitive group includes identifying the competitors by an identifier selected from the group consisting of a username, an email address, a cellular phone number or other unique identifier. The method further comprises sending an invitation which informs the competitors of an opportunity to be included in the competitive group. The invitation is sent by a competitor or the service provider with a mechanism selected from the group consisting of an email, an SMS text message, a voice message or similar addressable communication. The event is selected from the group consisting of, for example, a television-based sporting event, entertainment programming and a game show. Alternatively, the event comprises identical classic card, dice, trivia and word games played simultaneously. Transmitting the standings with the competitive groups occurs during the event. The standings are separated for each of the competitive groups. The standings are received periodically and represent performance in the competitive groups. The competitive groups are selected from the service provider generated competitive groups and/or user generated competitive groups. The service provider generated competitive groups are based on general playing characteristics. The device is selected from the group consisting of a cellular phone, a laptop computer, a personal computer and a PDA. The competitive groups are maintained in a database. In some embodiments, the results include a handicap.

In another embodiment, a system for conducting multiple contests of skill corresponding to an event comprises a device and a server coupled to the device through a network for storing competitive groups, receiving selections related to the event, storing results and standings based on the selections and transmitting the standings to the device. The server is further for providing an interface for generating competitive groups related to the event. The device contains an application for generating the competitive groups related to the event. The event is selected from the group consisting of a television-based sporting event, entertainment programming and a game show. Alternatively, the event comprises classic card, dice, trivia and word games played simultaneously. The device communicates data for generating the competitive groups, for selecting the competitive groups to join and for submitting the selections. The network includes at least one of the Internet and a cellular network. The standings are transmitted periodically to the device and represent performance in the competitive groups. The standings are separated for each of the competitive groups. The network identifies the competitive groups a user is eligible for. The system further comprises a database stored on the server for managing the selections, the results, the standings and the competitive groups. The device is selected from the group consisting of a cellular phone, a laptop computer, a personal computer and a PDA. In some embodiments, the results include a handicap.

In yet another aspect, a network of devices for conducting multiple contests of skill corresponding to an event comprises a plurality of devices and a server within a network, wherein the server and the plurality of devices communicate to conduct the multiple contests of skill corresponding to the event. The plurality of devices are selected from the group consisting of cellular phones, laptop computers, personal computers and PDAs.

In another aspect, a server device for conducting multiple contests of skill corresponding to an event comprises a storage mechanism and an application for interacting with the storage mechanism and a communicating device to generate and store competitive groups which are used to compete in the multiple contests of skill. The storage mechanism is a database. The communicating device is selected from the group consisting of a cellular phone, a laptop computer, a personal computer and a PDA. Interacting with the storage mechanism and the communicating device further includes receiving selections and transmitting standings.

In yet another aspect, a device for participating in multiple contests of skill corresponding to a single event comprises a communications module for coupling to a server and an application for utilizing the communications module for coupling to a server to communicate with the server to generate competitive groups which are used to compete in the multiple contests of skill. The application utilizes the communications module for coupling to the server to send selections to and receive standings from the server.

In yet another aspect, a device for participating in multiple simultaneous contests of skill corresponding to a single event comprises a storage module and an application stored within the storage module for simultaneously starting the multiple contests of skill and simultaneously scoring the multiple contests of skill. The application is downloaded from a server.

BRIEF DESCRIPTION OF THE DRAWINGS

FIG. **1** illustrates a flowchart of a process of utilizing the present invention.

FIG. **2** illustrates a flowchart of a process of generating a user generated competition group.

FIG. **3** illustrates a graphical representation of an embodiment of the present invention.

FIG. **4** illustrates a graphical representation of a network of devices.

DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENT

A method and system for conducting a variety of competitions simultaneously are described herein. The organization of competition in a game of skill has previously taken one of three basic formats:

1) Open contests: where large numbers of players enter an event, and all of the entrants are competing against each other for a single prize pool.
2) Head-to-head: where competitors are matched between a relatively small number of players identified to compete head-to-head against each other. The actual match making occurs in many forms, such as match play or elimination tournaments.
3) Team competitions: where two or more people are teamed to compete in head-to-head elimination against other similar sized teams in match play or total score competitions.

The present invention is a system and method allowing participants to simultaneously compete in multiple contests based on a single performance. For example, a user is able to participate in an open contest, compete in a team competition, and also compete against a small group of friends all utilizing a score achieved in the same event.

As a comparison, in tournaments held for bowling or golf, players are able to compete simultaneously in a gross score tournament as well as a net (handicap) tournament with the same performance. However, the contestants in the gross and net competitions are identical. The focus of the present invention is on enabling the entry of an individual in separate competitions, with separate prizes based on their single performance (score), where the pool of entrants is different for each competition.

The default mechanism for organizing a competition for this type of game in the past has been an open contest where all competitors are automatically entered in a contest against all other players. As taught in U.S. Pat. No. 5,813,913, incorporated herein by reference, the competitive field of players is also able to be divided into separate flights or groups according to skill and experience and only scores from other competitions at the same skill level are compared. Thousands of players are able to compete in a particular football game within a particular skill level. In some embodiments, game data includes a lockout signal to prevent improper game inputs by participants. For example, a central computer system broadcasts a lockout signal to prevent improper game inputs by participants.

For this example, Player A has been rated as an "intermediate" player and is competing against 10,000 other "intermediate" players in an interactive game of skill played with a live Monday Night Football broadcast. Prior to the telecast, Player A has arranged a side competition against four of his friends. Player B has organized through a match-making interface, a small competition which includes Players A, B, C, D and E. In this example, Players A and B are intermediate players, but Players C, D and E are novice players. Player B has also organized this small competition to require a $2.00 entry fee with a winner-takes-all rule. While none of the competitions require prizes or awards, they are allowable in games of skill.

When Player A logs on to a network supporting mobile games of skill, he is presented with the option of competing in the private separate contest that Player B set up. Player A agrees to compete with the $2.00 entry fee.

Separately, Player A has previously registered to participate in a sponsored season long team competition with coworkers F, G and H. The highest two scores of their four man team are totaled, and these points are added to the season's cumulative score with the highest team scores winning prizes. Thus, for a single football game, Player A is registered in: an open competition where the best competitors win prizes, a friendly competition for a prize pool of $10, and a season long team competition.

During the football game, Player A, like all of the other players, tries to get the best possible score by predicting the plays correctly before they happen. He plays in the same manner he would playing in the open contest alone, but his performance is in fact simultaneously separately scored in these completely different competitions against a different set of opponents for different rewards.

At the end of the event, Player A scored 12,565 points, in this example. That score was in the 92^{nd} percentile among the 10,000 intermediate players, but not high enough to win an award in that contest. That same score of 12,565 was also compared against Players B, C, D and E, and was the highest score, so Player A won the separate competition of $10. At the same time, Player A's score was the second highest among his team members in the separate team competition, and therefore was one which was totaled for the season long team competition.

It is essential to the success and enjoyment of such an invention that a potential competitor have an easy method of registering and entering these separate competitions on an ad hoc or seasonal basis. In addition, it is important to the success of such a system that all of the competitors be able to monitor periodically, not only their ongoing standings in the overall open competition at their skill level, but they will be able to periodically review all the competitions they are entered into to see the current standings.

For each of these competitions, there are two ways the group of attendees are able to be formed: A) organized by the service provider and/or a commercial sponsor or B) organized by the users themselves. Examples of service provider generated groups include those based on competitive skill level and region. For example, all intermediate players for a specific football game. An example of a user generated group is identifying five friends for a football competition. As each player enters a particular event (e.g. Monday Night Football), they are informed of the competitions they are playing in (e.g. Intermediate Global competition, the California Bay Area competition, and the personal Group competition). Each group is able to have a generic name and/or a specific name such as "personal group competition 1" or "Bob's Competition." When a player's phone or computing device establishes a connection with the network (e.g. the Airplay Network), the network identifies all of the groups that this player is able to compete in, and the server will upload this information to the phone over a cellular connection for display to the user. When a user couples to the network with a computing device other than a cellular phone, the information is available through the Internet. In some embodiments, participation in various group compe-

titions involves additional fees. Users have the ability to choose not to compete in any or all of the groups they have been invited to.

There are two classes of Groups: System Generated Groups (e.g. Service Provider Groups) and User Generated Groups. System Generated Groups are generated by the service administrator based on database information about the user. Examples include Intermediate Skill Level and California Bay Area San Francisco 49ers Fans. User Generated Groups are defined by one or more members. A member is able to generate a group either from the services website or from a cellular phone interface. To generate a group, a member generates a name for the group or a generic name is assigned, and then the member adds other members to the group. The member is able to add other members to the group by their handle (unique identifier), email address (for new members) or by their cellular phone number. Groups are able to be assigned to a particular event. A group is able to be designated as an active group or a party. User group owners generate a party by associating the group to a particular event (e.g. December 12th Monday Night Football Game). In some embodiments, an email invitation or text message is sent to inform the members of the group that they have been invited to a party.

The game control server maintains a list of groups. Service Provider Groups are automatically assigned to events. User Groups are assigned to events by the group owners. In both cases, a list of active groups is known before the start of the event such as parties for a particular event. Within each of these known groups a list of all the participants is also maintained. This is able to be implemented in several ways. The most common way is via a database manager. This is able to be done through a data structure that is loaded for each event, and a database is one natural implementation to keep track of the group/participant relationships.

Throughout the game, a server manages the scores for every player. The scores are updated in a central location such as a database server, and are sorted with the members of a particular group to identify the rankings for each member in the competition.

During an event, scores and rankings are sent to members of the various groups. This is done after each scoring opportunity, or at a slower pace such as every five minutes or every five scoring opportunities. For small groups (e.g. 20 or less active participants) all of the scores and rankings are able to be sent by the server and displayed on the participant's device. For very large groups there are two approaches that can be taken: 1) Common message or 2) Individualized message. Sending a common message for large groups is much more efficient on the network, and is able to still provide a significant amount of information. The message is able to contain the top 20 names and scores for this group as well as the score that is required to be in the top 95%, 90%, 85%, . . . 5%. When the client receives this message, it determines what percentile the user is in by extrapolating its score between the percentile scores that the user is between. In sending an individual message for a large group, the server would still send the top 20 names and scores as well as the exact percentile that this user falls in.

Each separate tournament is managed effectively. A message is sent from the game server to the individual clients associated with each group. For very large groups, this message is able to be identical for all of those that are receiving the message. Past results tracked on the phone and in more detail on the website will track the rankings in each of the different groups associated with an event. A selection of pre-produced audio and visual comments, for example, in the nature of taunts and cheers are able to be selected from a menu and sent to a specific individual or to all competitors in the group.

Games of skill played on the Internet or cellular phones based upon live telecast sporting events or popular game shows are expected to attract a large number of potential competitors. As in all games of skill, there will be a wide variety of experience and talent and many motivations to play. To some, the enjoyment will be competing in open competitions against skilled players to test their medal. For others, it may be just the ability to compete and possibly win against a handful of close friends who share the same passion for the underlying televised event. Others may be more team oriented and derive more enjoyment from participating as a member of the group. The method and systems described herein provide not only the ability for an individual to find a group of competitors and a contest attractive to them, but also allows them to compete in multiple contests simultaneously with the identical performance and with the same investment of time. This increases not only the sense of community, but provides greater opportunities for the satisfaction of beating friends as well as winning prizes.

FIG. **1** illustrates a flowchart of a process of utilizing the present invention. In the step **100**, competitive groups are generated related to events. The competitive groups are either system generated or user generated. As described above, a system generated group is generally based on skill level, location or another generic attribute that some users qualify for, while other users do not. A user generated group is selected by a user where participants are added to the group by entering a username, email address, cellular phone number, or another distinguishing identifier. User generated groups typically include groups of friends, co-workers and other groups of people that a user wants to compete with. Any number of system groups and user groups are able to be generated. In addition to determining who is included in the competition, the events being played within the competition are selected. For example, a user is able to set up a Monday Night Football league, wherein every Monday night for the regular season of the NFL, the users within the group compete based on the Monday night game. In some embodiments, the specific games that the users compete in are selected at later dates beyond the initial generation of the group.

In the step **102**, users couple to a network (e.g. the Airplay Network) to participate in the generated competitions. In the step **104**, the users are informed which competitions are available for participation. For example, an intermediate user couples to the network using his cellular phone and is greeted with a list of competitions available for him to join. The list includes, a free open competition for all intermediate players for a specified game, an individual group competition that his friend invited him to join also for the same specified game, a team competition that his co-workers wanted him to be a part of where it is a season long tournament which includes the same specified game and another system generated competition also for the same game that costs $10 to enter with larger prizes available than the free competition. In the step **106**, each user who has coupled to the network joins the groups desired. Continuing with the example above, the user decides to join the free open competition, the friend's competition and the co-worker competition but does not join the $10 competition.

In the step **108**, the users then participate in the competitions by sending user selections (e.g. predictions) to a

server within the network for monitoring, analyzing and determining results based on the selections. Based on the results, standings for each competition are also determined. Using the example above again, although the user joined three different competitions related to a single game, the user competes exactly the same as if he entered in only one of the competitions, since his input is distributed for the three different competitions.

In the step **110**, the results based on the users' selections are stored. The results are stored in a way such that they are easily retrieved for each competition. For example, a storing mechanism such as a database stores the results of Game X for Player A where Player A's score is 1000. In the free open competition, Player A's score was not good enough to win a prize. However, in the friendly competition, it was the highest score, and in the co-worker team competition it was a score usable by the team. Therefore, although the score was not a winning score for one competition, it was a beneficial score in the other two competitions. By competing in multiple competitions for the same game/event, a user's results/score could provide different outcomes depending on the competition. Therefore, the proper associations of each competition and the score are required.

In the step **112**, each user receives the results and/or standings on his cellular phone or computer. The results and/or standings arrive at varying times depending on the setup of the system. The results and/or standings are received or at least accessible after the competition ends. If desired, the results and/or standings are also received throughout the competition such as every five minutes or after a certain number of selections are made. The standings from the results determine who wins at the end of the competition. While displayed during the game, the standings show what position the user is in. The standings are based on the results of the selections made by the users.

FIG. **2** illustrates a flowchart of a process of generating a user generated competition group. In the step **200**, a user couples to a server within a network (e.g. the Airplay Network) storing an application to generate a competition group. In some embodiments, the application is stored on the user's cellular phone instead of or in addition to on the server. Preferably, the application provides a graphical user interface such as an interactive website for easily generating the competition group. In the step **202**, the user selects the type of competition, such as open, head-to-head or team, in addition to other types of competitions. The user also adds any additional requirements or conditions such as intermediate players only or $2 entry fee with the winner-take-all. Additionally, the user labels or names the competition group. In the step **204**, competitors are added to the competition. The competitors are added based on a username, phone number, email address or another identification mechanism. In the step **206**, either at the initial set up of the competition group or later on, one or more events are selected to be competed in. For example, if a user wants to set up a competition specifically for Super Bowl XLI, he is able to designate that immediately. Or if a user wants to start a week-long competition related to Jeopardy, he is able to do that as well. The user is also able to retain the same group and modify it to generate a second competition. For example, after the Super Bowl XLI competition ends, the user is able to generate another competition with the same group for the NCAA BCS Bowl Championship Game. Users are able to generate as basic or as complex a competition group as desired. As described above, it is able to be for a single event, a variety of events or an entire season of events. Preferably, a database is utilized to organize the competition groups for easy correlation of data.

FIG. **3** illustrates a graphical representation of an embodiment of the present invention. A server **300** contains an application **302** and a storage mechanism **304**. The application **302** is preferably a web application or at least has a web component to enable users to interact with a web graphical user interface to input data and review data. The storage mechanism **304** is utilized for storing selections and results from the selections as well as competition groups. The storage mechanism **304** preferably includes a database for organizing the data including the selections, results, standings and competition groups amongst other data needed for executing the competitions. The server **300** is part of a network **306**. A device **308** couples to the server **300** through the network **306**. In some embodiments the network **306** includes the Internet. In some embodiments, the network **306** includes a cellular network Also, in some embodiments, the network **306** includes both the Internet and a cellular network. The device **308** is selected from a cellular phone, a PDA, a computer, a laptop or any other device capable of communicating with the server **300**. As described above, in some embodiments, an application for allowing users to generate competition groups, input selections and communicate with the server in general is included in the device **308** instead of or in addition to the application **302** on the server **300**.

FIG. **4** illustrates a graphical representation of a network of devices. As described above, the server **300** contains the application **302** and the storage mechanism **304** for inputting and outputting data related to the competitions. The device **308**, couples to the network through a network **306**. As described above, the network includes either the Internet, a cellular network or both. Although the device **308** is able to be a device other than a cellular phone as shown, other devices are also shown coupled to the network **306** therefore forming a network of devices **400**. The other devices include a laptop **310**, a computer **312** and a PDA **314**. One of the devices **308** is shown with an application **320** for enabling the user to generate competition groups and communicate with the server **300**.

In some embodiments, handicaps are implemented so that users of different levels are able to compete more fairly. Handicaps provide additional points to users at lower levels so their score is comparable to a more advanced user. The handicaps are determined based on analysis of the scoring. For example, if advanced users on average score 3000, while intermediate users on average score 2000 and beginners on average score 1000 for the same set of questions, then a fair handicap is 1000 per difference in level. Thus, when there is a friendly competition between one user who is advanced by playing every week and three beginner users who play once a month just for fun, a straight game without handicaps is not likely going to be a close competition. However, if the beginner users are given help to put them on par with the advanced user, then the outcome of the competition could result in a beginner user winning.

In some embodiments, each user competes in the same game, but slightly different sets of questions/choices are posed based on the competition level. For example, an intermediate user chooses to play in an open intermediate competition and also with a group of beginner friends. Each of the beginner users is asked to choose what type of play the following play is going to be (e.g. Run or Pass). The intermediate user is also asked to choose the following play. However, the intermediate user is also asked to choose which direction the play will go (e.g. Left or Right). There-

fore, the same game is being played to some extent, but there is a slight modification, so that more advanced users have additional options. However, when scoring, the additional options apply only across the same level. Thus, the user selecting Left or Right correctly has no effect on the scoring in the beginner competition. It only affects scoring for the intermediate competition. Thus, users are able to compete at different levels for the same event.

To utilize the present invention, users select from or generate competition groups to participate in. The users select system generated competition groups which are specific to levels, geographic locations and other general categories. The users are also able to generate their own competition groups which include friends, family, co-workers or other groups of people they choose. After the competition groups are generated, users are able to join whichever group they are invited to. After joining one or more groups, the users are able to join additional groups beyond that as they are generated and become available to the user. A user is informed of the competition groups available for entering either by email, Short Message Service (SMS) text message, voice message or when the user couples to the network to view/play competitions. After joining the desired competition groups, the user participates in the competitions by answering questions or making selections based on viewing a sporting event, television show, game show or other event where skill is involved in making choices. In addition, games of skill with a common start time can be conducted simultaneously in real-time, based on classic card, dice, trivia, word and other games. The selections/answers/predictions are stored and results and/or standings are sent to the user. The results and/or standings throughout the competition show how well the user is doing compared to other competitors via standings, and when the competition is over, the results and/or standings determine who the winner is. Additionally, since multiple competitions are occurring based on a single event, the results and standings are organized so that the user is able to understand how he is doing in each event. For example, if a user is winning by a lot in his two friendly competitions, but is slightly out of prize position in the open competition, he will not simply relax and coast to victory in his friendly competitions. He is able to realize that by performing slightly better, he still has a chance to win a prize in the open competition, while still winning easily in the friendly competitions.

In operation, the present invention allows users to set up and compete in multiple competitions for a single event. Although users are competing against typically different competitors in different competition groups, the same selections are utilized to produce scores that have specific meaning based on the competition group. As described above, a user may lose in one competition group but win in another competition group because the competitors are different. Also, the requirements of each group are different as well. For example, in team play, if the top two scores are counted and the user has one of the top two scores, then his score is important even though he lost in a different competition group. In another example, the competition group is a season long event where there is no weekly winner, but only a year-end winner. Thus, although the competitor is doing terrible one week and has no chance of winning the separate weekly competition, the user is still encouraged to do as well as possible for the year-end total. By allowing users to compete in multiple competition groups for the same event, the user interaction increases substantially. For example, instead of a user simply playing his standard weekly intermediate football competition, the user is also invited to play in his family's tournament for bragging rights, his friend's competition where the winner gets $20 and his co-worker's competition where the lowest score pays for a round of drinks the following Friday. With more chances to win, users have a much more vested interest in competing. To ensure users do not get frustrated with the scoring, the results and/or standings are displayed in a very user-friendly format so that a user knows how well he is doing in each respective competition.

In some embodiments, multiple servers are used within the network. For example, one server is dedicated for the scoring, a separate server is dedicated for the database and another server is dedicated for hosting the graphical user interface.

The present invention has been described in terms of specific embodiments incorporating details to facilitate the understanding of principles of construction and operation of the invention. Such reference herein to specific embodiments and details thereof is not intended to limit the scope of the claims appended hereto. It will be readily apparent to one skilled in the art that other various modifications may be made in the embodiment chosen for illustration without departing from the spirit and scope of the invention as defined by the claims.

What is claimed is:

1. A method, programmed in a memory of a device, of participating in a plurality of competitive groups, each comprising a plurality of competitors and corresponding to one or more events, the method comprising:

determining, with the device, a physical location of a user and eligibility of the user to participate in the plurality of competitive groups based on the physical location of the user;

receiving, with the device, one or more event selections by the user related to the one or more events prior to the beginning of a first event of the one or more events, wherein the one or more event selections enable the user to participate in the plurality of competitive groups; and

triggering, on the device, a lockout signal preventing further additional user input.

2. The method as claimed in claim **1** wherein the one or more events are selected from the group consisting of a live television-based event, a recorded television event, a scheduled competition, a scheduled series of competitions, a sporting event, an event based on a video game, computer game, mobile game or electronic game conducted in real time, an entertainment show, a game show, a reality show and a news show.

3. A server device for conducting multiple contests each comprising a plurality of competitors and corresponding to one or more events, the server device comprising:

a memory configured for:

determining a physical location of a user and eligibility of the user to participate in a plurality of competitive groups based on the physical location of the user;

receiving one or more event selections by the user related to the one or more events; and

triggering a lockout signal preventing further additional user input; and

a processor configured for processing the multiple contests corresponding to the one or more events, wherein processing the multiple contests is based on the one or more event selections for the user which enables the user to participate in the plurality of competitive groups, wherein the server device presents standings

and results related to the event selections, wherein the standings in each of the plurality of competitive groups are based on the results.

4. A device for participating in multiple contests each comprising a plurality of competitors and corresponding to one or more events, the device comprising:

a communications module for coupling to a server; and

an application for utilizing the communications module for coupling to a server to communicate with the server determine which competitive groups a user is eligible to complete in which are used to compete in the multiple contests wherein the application enables an individual user to join a plurality of competitive groups for the one or more events, wherein the application is configured for:

determining a physical location of a user and eligibility of the user to participate in the plurality of competitive groups based on the physical location of the user;

receiving one or more event selections by the user related to the one or more events prior to the beginning of the first one of the one or more events, wherein the one or more event selections enable the user to participate in the plurality of competitive groups; and

triggering a lockout signal preventing further additional user input.

5. The device as claimed in claim **4** wherein the application utilizes the communications module for coupling to the server to send selections to and receive standings from the server.

6. The method as claimed in claim **1** wherein the one or more events are one or more live events.

7. The method as claimed in claim **1** wherein the one or more events comprise multiple events over a period of time of a same sport.

8. The method as claimed in claim **1** wherein the lockout signal occurs immediately before competitors in the competitive groups are able to see or hear relevant live action unfold.

9. The method as claimed in claim **1** wherein the lockout signal is triggered based on a countdown time presented simultaneously to all competitors.

10. The server device as claimed in claim **3** wherein the one or more events are one or more live events.

11. The server device as claimed in claim **3** wherein the one or more events comprise multiple events over a period of time of a same sport.

12. The server device as claimed in claim **3** wherein the lockout signal occurs immediately before competitors in the contests are able to see or hear relevant live action unfold.

13. The server device as claimed in claim **3** wherein the lockout signal is triggered based on a countdown time presented simultaneously to all competitors.

14. The server device as claimed in claim **3** wherein the one or more events comprise classic games of skill including card, dice, trivia and word games played simultaneously.

15. The device as claimed in claim **4** wherein the one or more events are one or more live events.

16. The device as claimed in claim **4** wherein the one or more events comprise multiple events over a period of time of a same sport.

17. The device as claimed in claim **4** wherein the lockout signal occurs immediately before competitors in the contests are able to see or hear relevant live action unfold.

18. The device as claimed in claim **4** wherein the lockout signal is triggered based on a countdown time presented simultaneously to all competitors.

19. The device as claimed in claim **4** wherein the one or more events comprise classic games of skill including card, dice, trivia and word games played simultaneously.

* * * * *

Exhibit 9

US012005349B2

(12) **United States Patent**
Lockton

(10) **Patent No.: US 12,005,349 B2**
(45) **Date of Patent: *Jun. 11, 2024**

(54) **SYNCHRONIZED GAMING AND PROGRAMMING**

(71) Applicant: **Winview, Inc.**, Redwood City, CA (US)

(72) Inventor: **David B. Lockton**, Redwood City, CA (US)

(73) Assignee: **Winview IP Holdings, LLC**, Charlotte, NC (US)

(*) Notice: Subject to any disclaimer, the term of this patent is extended or adjusted under 35 U.S.C. 154(b) by 82 days.

This patent is subject to a terminal disclaimer.

(21) Appl. No.: **17/488,674**

(22) Filed: **Sep. 29, 2021**

(65) **Prior Publication Data**

US 2022/0016524 A1 Jan. 20, 2022

Related U.S. Application Data

(60) Continuation of application No. 16/865,000, filed on May 1, 2020, now Pat. No. 11,154,775, which is a (Continued)

(51) **Int. Cl.**
A63F 13/352 (2014.01)
A63F 13/355 (2014.01)
(Continued)

(52) **U.S. Cl.**
CPC ***A63F 13/352*** (2014.09); ***A63F 13/355*** (2014.09); ***A63F 13/46*** (2014.09);
(Continued)

(58) **Field of Classification Search**
None
See application file for complete search history.

(56) **References Cited**

U.S. PATENT DOCUMENTS

2,010,516 A 8/1935 Hoffmann
2,051,615 A 8/1936 Miles
(Continued)

FOREIGN PATENT DOCUMENTS

CA 2252074 11/1997
CA 2252021 11/1998
(Continued)

OTHER PUBLICATIONS

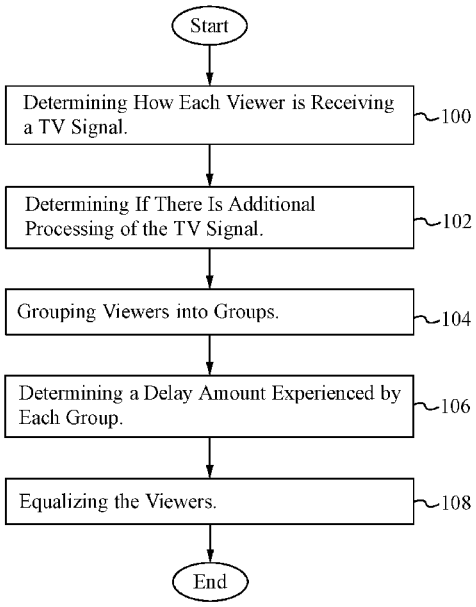
Pinnacle, "The basics of reverse line movement," Jan. 19, 2018, Retrieved on Jan. 22, 2020 , http://www.pinnacle.com/en/betting-articles educational/basics-of-reverse-line-movement/QAH26XGGQQS7M3GD.
(Continued)

Primary Examiner — Peter J Iannuzzi
(74) *Attorney, Agent, or Firm* — Haverstock & Owens, A Law Corporation

(57) **ABSTRACT**

To encourage viewer participation, games, contests and social interactions are able to be synchronized with programming such as television shows or commercials utilizing a second screen such as a cell phone, iPad® or laptop computer. The programming is able to be television programming, Internet programming (e.g. a video displayed on a webpage or mobile device) or any other programming. The gaming is able to be any game such as a game of skill or chance, for example, a scavenger hunt or a treasure hunt.

41 Claims, 7 Drawing Sheets



Related U.S. Application Data

continuation of application No. 15/886,704, filed on Feb. 1, 2018, now Pat. No. 10,653,955, which is a continuation of application No. 15/586,198, filed on May 3, 2017, now Pat. No. 9,919,210, which is a continuation-in-part of application No. 15/332,625, filed on Oct. 24, 2016, now Pat. No. 10,137,369, and a continuation-in-part of application No. 14/172,539, filed on Feb. 4, 2014, now Pat. No. 9,672,692, which is a division of application No. 13/484,129, filed on May 30, 2012, now Pat. No. 8,705,195, which is a continuation-in-part of application No. 13/403,845, filed on Feb. 23, 2012, now Pat. No. 8,717,701, which is a continuation of application No. 11/786,992, filed on Apr. 12, 2007, now Pat. No. 8,149,530, said application No. 15/332,625 is a continuation of application No. 11/542,335, filed on Oct. 2, 2006.

(60) Provisional application No. 60/791,793, filed on Apr. 12, 2006, provisional application No. 60/723,301, filed on Oct. 3, 2005.

(51) **Int. Cl.**

A63F 13/46	(2014.01)
A63F 13/537	(2014.01)
G07F 17/32	(2006.01)
H04L 65/401	(2022.01)
H04L 65/611	(2022.01)
H04L 67/131	(2022.01)

(52) **U.S. Cl.**

CPC ***A63F 13/537*** (2014.09); ***G07F 17/3227*** (2013.01); ***H04L 65/4015*** (2013.01); ***H04L 65/611*** (2022.05); ***H04L 67/131*** (2022.05)

(56) **References Cited**

U.S. PATENT DOCUMENTS

2,193,638	A	3/1940	Morton
2,274,933	A	3/1942	Peck
2,831,105	A	4/1958	Parker
3,550,944	A	12/1970	Chamberlin
3,562,650	A	2/1971	Gossard et al.
3,689,071	A	9/1972	Kucera
4,141,548	A	2/1979	Everton
4,270,755	A	6/1981	Willhide et al.
4,386,377	A	5/1983	Hunter, Jr.
4,496,148	A	1/1985	Morstain et al.
4,521,803	A	6/1985	Glittinger
4,592,546	A	6/1986	Fascenda et al.
4,816,904	A	3/1989	McKenna et al.
4,918,603	A	4/1990	Hughes et al.
4,930,010	A	5/1990	MacDonald
5,013,038	A	5/1991	Luvenberg
5,018,736	A	5/1991	Pearson et al.
5,035,422	A	7/1991	Berman
5,073,931	A	12/1991	Audebert et al.
5,083,271	A	1/1992	Thatcher et al.
5,083,800	A	1/1992	Lockton
5,119,295	A	6/1992	Kapur
5,120,076	A	6/1992	Luxenberg et al.
5,213,337	A	5/1993	Sherman
5,227,874	A	7/1993	Von Kohorn
5,256,863	A	10/1993	Ferguson
5,263,723	A	11/1993	Pearson et al.
5,283,734	A	2/1994	Von Kohorn
5,327,485	A	7/1994	Leaden
5,343,236	A	8/1994	Koppe et al.
5,343,239	A	8/1994	Lappington et al.
5,417,424	A	5/1995	Snowden
5,462,275	A	10/1995	Lowe et al.
5,479,492	A	12/1995	Hofstee et al.
5,488,659	A	1/1996	Millani
5,519,433	A	5/1996	Lappington
5,530,483	A	6/1996	Cooper
5,553,120	A	9/1996	Katz
5,566,291	A	10/1996	Boulton et al.
5,585,975	A	12/1996	Bliss
5,586,257	A	12/1996	Perlman
5,589,765	A	12/1996	Ohmart et al.
5,594,938	A	1/1997	Engel
5,618,232	A	4/1997	Martin
5,628,684	A	5/1997	Jean-Etienne
5,636,920	A	6/1997	Shur et al.
5,638,113	A	6/1997	Lappington
5,643,088	A	7/1997	Vaughn et al.
5,663,757	A	9/1997	Morales
5,711,715	A	1/1998	Ringo
5,759,101	A	6/1998	Won Kohorn
5,761,606	A	6/1998	Wolzien
5,762,552	A	6/1998	Voung et al.
5,764,275	A	6/1998	Lappington et al.
5,794,210	A	8/1998	Goldhaber et al.
5,805,230	A	9/1998	Staron
5,813,913	A	9/1998	Berner et al.
5,818,438	A	10/1998	Howe et al.
5,828,843	A	10/1998	Grimm
5,838,774	A	11/1998	Weiser, Jr.
5,838,909	A	11/1998	Roy
5,846,132	A	12/1998	Junkin
5,848,397	A	12/1998	Marsh et al.
5,860,862	A	1/1999	Junkin
5,882,260	A	3/1999	Marks
5,894,556	A	4/1999	Grimm
5,916,024	A	6/1999	Von Kohorn
5,870,683	A	9/1999	Wells et al.
5,970,143	A	10/1999	Schneier et al.
5,971,854	A	10/1999	Pearson et al.
5,987,440	A	11/1999	O'Neil et al.
6,009,458	A	12/1999	Hawkins et al.
6,015,344	A	1/2000	Kelly et al.
6,016,337	A	1/2000	Pykalisto
6,038,599	A	3/2000	Black
6,042,477	A	3/2000	Addink
6,064,449	A	5/2000	White
6,104,815	A	8/2000	Alcorn et al.
6,110,041	A	8/2000	Walker et al.
6,117,013	A	9/2000	Elba
6,126,543	A	10/2000	Friedman
6,128,660	A	10/2000	Grimm
6,135,881	A	10/2000	Abbott et al.
6,154,131	A	11/2000	Jones, II
6,174,237	B1	1/2001	Stephenson
6,182,084	B1	1/2001	Cockrell et al.
6,193,610	B1	2/2001	Junkin
6,222,642	B1	4/2001	Farrell et al.
6,233,736	B1	5/2001	Wolzien
6,251,017	B1	6/2001	Leason et al.
6,264,650	B1	7/2001	Goldberg
6,267,670	B1	7/2001	Walker
6,287,199	B1	9/2001	McKeown et al.
6,293,868	B1	9/2001	Bernard
6,312,336	B1	11/2001	Handelman et al.
6,343,320	B1	1/2002	Fairchild
6,345,297	B1	2/2002	Grimm
6,371,855	B1	4/2002	Gavriloff
6,373,462	B1	4/2002	Pan
6,411,969	B1	6/2002	Tam
6,416,414	B1	7/2002	Stadelmann
6,418,298	B1	7/2002	Sonnenfeld
6,425,828	B2	7/2002	Walker et al.
6,434,398	B1	8/2002	Inselberg
6,446,262	B1	9/2002	Malaure et al.
6,470,180	B1	10/2002	Kotzin et al.
6,475,090	B2	11/2002	Gregory
6,524,189	B1	2/2003	Rautila
6,527,641	B1	3/2003	Sinclair et al.
6,530,082	B1	3/2003	Del Sesto et al.
6,536,037	B1	3/2003	Guheen et al.
6,537,150	B1	3/2003	Luciano
6,578,068	B1	6/2003	Bowma-Amuah

(56) **References Cited**

U.S. PATENT DOCUMENTS

6,594,098 B1 7/2003 Sutardja
6,604,997 B2 7/2003 Saidakovsky et al.
6,610,953 B1 8/2003 Tao et al.
6,611,755 B1 8/2003 Coffee
6,648,760 B1 11/2003 Nicastro
6,659,860 B1 12/2003 Yamamoto et al.
6,659,861 B1 12/2003 Faris
6,659,872 B1 12/2003 Kaufman et al.
6,690,661 B1 2/2004 Agarwal et al.
6,697,869 B1 2/2004 Mallart
6,718,350 B1 4/2004 Karbowski
6,752,396 B2 6/2004 Smith
6,758,754 B1 7/2004 Lavanchy et al.
6,758,755 B2 7/2004 Kelly et al.
6,760,595 B2 7/2004 Insellberg
6,763,377 B1 7/2004 Balknap et al.
6,766,524 B1 7/2004 Matheny et al.
6,774,926 B1 8/2004 Ellis et al.
6,785,561 B1 8/2004 Kim
6,801,380 B1 10/2004 Saturdja
6,806,889 B1 10/2004 Malaure et al.
6,807,675 B1 10/2004 Millard et al.
6,811,482 B2 11/2004 Letovsky
6,811,487 B2 11/2004 Sengoku
6,816,628 B1 11/2004 Sarachik et al.
6,817,947 B2 11/2004 Tanskanen
6,824,469 B2 11/2004 Allibhoy et al.
6,837,789 B2 1/2005 Garahi et al.
6,837,791 B1 1/2005 McNutt et al.
6,840,861 B2 1/2005 Jordan et al.
6,845,389 B1 1/2005 Sen
6,846,239 B2 1/2005 Washio
6,857,122 B1 2/2005 Takeda et al.
6,863,610 B2 3/2005 Vancraeynest
6,870,720 B2 3/2005 Iwata et al.
6,871,226 B1 3/2005 Ensley et al.
6,873,610 B1 3/2005 Noever
6,884,166 B2 4/2005 Leen et al.
6,884,172 B1 4/2005 Lloyd et al.
6,887,159 B2 5/2005 Leen et al.
6,888,929 B1 5/2005 Saylor
6,893,347 B1 5/2005 Zilliacus et al.
6,898,762 B2 5/2005 Ellis et al.
6,899,628 B2 5/2005 Leen et al.
6,903,681 B2 6/2005 Faris
6,908,389 B1 6/2005 Puskala
6,942,574 B1 9/2005 LeMay et al.
6,944,228 B1 9/2005 Dakss et al.
6,960,088 B1 11/2005 Long
6,978,053 B1 12/2005 Sarachik et al.
7,001,279 B1 2/2006 Barber et al.
7,029,394 B2 4/2006 Leen et al.
7,035,626 B1 4/2006 Luciano, Jr.
7,035,653 B2 4/2006 Simon et al.
7,058,592 B1 6/2006 Heckerman et al.
7,076,434 B1 7/2006 Newman et al.
7,085,552 B2 8/2006 Buckley
7,116,310 B1 10/2006 Evans et al.
7,117,517 B1 10/2006 Milazzo et al.
7,120,924 B1 10/2006 Katcher et al.
7,124,410 B2 10/2006 Berg
7,125,336 B2 10/2006 Anttila et al.
7,136,871 B2 11/2006 Ozer et al.
7,144,011 B2 12/2006 Asher et al.
7,169,050 B1 1/2007 Tyler
7,185,355 B1 2/2007 Ellis
7,187,658 B2 3/2007 Koyanagi
7,191,447 B1 3/2007 Ellis et al.
7,192,352 B2 3/2007 Walker et al.
7,194,758 B1 3/2007 Waki et al.
7,228,349 B2 6/2007 Barone, Jr. et al.
7,231,630 B2 6/2007 Acott et al.
7,233,922 B2 6/2007 Asher et al.
7,240,093 B1 7/2007 Danieli et al.
7,244,181 B2 7/2007 Wang et al.
7,249,367 B2 7/2007 Bove, Jr. et al.
7,254,605 B1 8/2007 Strum
7,260,782 B2 8/2007 Wallace et al.
RE39,818 E 9/2007 Slifer
7,283,830 B2 10/2007 Buckley
7,288,027 B2 10/2007 Overton
7,341,517 B2 3/2008 Asher et al.
7,343,617 B1 3/2008 Kartcher et al.
7,347,781 B2 3/2008 Schultz
7,351,149 B1 4/2008 Simon et al.
7,367,042 B1 4/2008 Dakss et al.
7,379,705 B1 5/2008 Rados et al.
7,389,144 B1 6/2008 Osorio
7,430,718 B2 9/2008 Gariepy-Viles
7,452,273 B2 11/2008 Amaitis et al.
7,460,037 B2 12/2008 Cattone et al.
7,461,067 B2 12/2008 Dewing et al.
7,502,610 B2 3/2009 Maher
7,510,474 B2 3/2009 Carter, Sr.
7,517,282 B1 4/2009 Pryor
7,534,169 B2 5/2009 Amaitis et al.
7,543,052 B1 6/2009 Cesa Klein
7,562,134 B1 7/2009 Fingerhut et al.
7,602,808 B2 10/2009 Ullmann
7,610,330 B1 10/2009 Quinn
7,614,944 B1 11/2009 Hughes et al.
7,630,986 B1 12/2009 Herz et al.
7,693,781 B2 4/2010 Asher et al.
7,699,707 B2 4/2010 Bahou
7,702,723 B2 4/2010 Dyl
7,711,628 B2 5/2010 Davie et al.
7,729,286 B2 6/2010 Mishra
7,753,772 B1 7/2010 Walker
7,753,789 B2 7/2010 Walker et al.
7,780,528 B2 8/2010 Hirayama
7,828,661 B1 11/2010 Fish
7,835,961 B2 11/2010 Davie et al.
7,860,993 B2 12/2010 Chintala
7,886,003 B2 2/2011 Newman
7,907,211 B2 3/2011 Oostveen et al.
7,907,598 B2 3/2011 Anisimov
7,909,332 B2 3/2011 Root
7,925,756 B1 4/2011 Riddle
7,926,810 B2 4/2011 Fisher et al.
7,937,318 B2 5/2011 Davie et al.
7,941,482 B2 5/2011 Bates
7,941,804 B1 5/2011 Herington
7,976,389 B2 7/2011 Cannon et al.
8,002,618 B1 8/2011 Lockton et al.
8,006,314 B2 8/2011 Wold
8,025,565 B2 9/2011 Leen et al.
8,028,315 B1 9/2011 Barber
8,082,150 B2 12/2011 Wold
8,086,445 B2 12/2011 Wold et al.
8,086,510 B2 12/2011 Amaitis et al.
8,092,303 B2 1/2012 Amaitis et al.
8,092,306 B2 1/2012 Root
8,105,141 B2 1/2012 Leen et al.
8,107,674 B2 1/2012 Davis et al.
8,109,827 B2 2/2012 Cahill et al.
8,128,474 B2 3/2012 Amaitis et al.
8,147,313 B2 4/2012 Amaitis et al.
8,147,373 B2 4/2012 Amaitis et al.
8,149,530 B1 4/2012 Lockton et al.
8,155,637 B2 4/2012 Fujisawa
8,162,759 B2 4/2012 Yamaguchi
8,176,518 B1 5/2012 Junkin et al.
8,186,682 B2 5/2012 Amaitis et al.
8,204,808 B2 6/2012 Amaitis et al.
8,219,617 B2 7/2012 Ashida
8,240,669 B2 8/2012 Asher
8,246,048 B2 8/2012 Amaitis et al.
8,267,403 B2 9/2012 Fisher et al.
8,342,924 B2 1/2013 Leen et al.
8,342,942 B2 1/2013 Amaitis et al.
8,353,763 B2 1/2013 Amaitis et al.
8,376,855 B2 2/2013 Lockton et al.
8,396,001 B2 3/2013 Jung
8,397,257 B1 3/2013 Barber

(56) **References Cited**

U.S. PATENT DOCUMENTS

8,465,021 B2 6/2013 Asher et al.
8,473,393 B2 6/2013 Davie et al.
8,474,819 B2 7/2013 Asher et al.
8,535,138 B2 9/2013 Amaitis et al.
8,538,563 B1 9/2013 Barber
8,543,487 B2 9/2013 Asher et al.
8,555,313 B2 10/2013 Newman
8,556,691 B2 10/2013 Leen et al.
8,585,490 B2 11/2013 Amaitis et al.
8,597,117 B2 12/2013 Bruce
8,622,798 B2 1/2014 Lockton et al.
8,632,392 B2 1/2014 Shore et al.
8,634,943 B2 1/2014 Root
8,638,517 B2 1/2014 Lockton et al.
8,641,511 B2 2/2014 Ginsberg et al.
8,659,848 B2 2/2014 Lockton et al.
8,672,751 B2 3/2014 Leen et al.
8,699,168 B2 4/2014 Lockton et al.
8,705,195 B2 * 4/2014 Lockton H04L 65/611 381/103
8,708,789 B2 4/2014 Asher et al.
8,717,701 B2 5/2014 Lockton et al.
8,727,352 B2 5/2014 Amaitis et al.
8,734,227 B2 5/2014 Leen et al.
8,737,004 B2 5/2014 Lockton et al.
8,738,694 B2 5/2014 Huske et al.
8,771,058 B2 7/2014 Alderucci et al.
8,780,482 B2 7/2014 Lockton et al.
8,805,732 B2 8/2014 Davie et al.
8,813,112 B1 8/2014 Cibula et al.
8,814,664 B2 8/2014 Amaitis et al.
8,817,408 B2 8/2014 Lockton et al.
8,837,072 B2 9/2014 Lockton et al.
8,849,225 B1 9/2014 Choti
8,849,255 B2 9/2014 Choti
8,858,313 B1 10/2014 Selfors
8,870,639 B2 10/2014 Lockton et al.
8,935,715 B2 1/2015 Cibula et al.
9,056,251 B2 6/2015 Lockton
9,067,143 B2 6/2015 Lockton et al.
9,069,651 B2 6/2015 Barber
9,076,303 B1 7/2015 Park
9,098,883 B2 8/2015 Asher et al.
9,111,417 B2 8/2015 Leen et al.
9,205,339 B2 12/2015 Cibula et al.
9,233,293 B2 1/2016 Lockton
9,258,601 B2 2/2016 Lockton et al.
9,270,789 B2 2/2016 Huske et al.
9,289,692 B2 3/2016 Barber
9,306,952 B2 4/2016 Burman et al.
9,314,686 B2 4/2016 Lockton
9,314,701 B2 4/2016 Lockton et al.
9,355,518 B2 5/2016 Amaitis et al.
9,406,189 B2 8/2016 Scott et al.
9,430,901 B2 8/2016 Amaitis et al.
9,457,272 B2 10/2016 Lockton et al.
9,498,724 B2 11/2016 Lockton et al.
9,501,904 B2 11/2016 Lockton
9,504,922 B2 11/2016 Lockton et al.
9,511,287 B2 12/2016 Lockton et al.
9,526,991 B2 12/2016 Lockton et al.
9,536,396 B2 1/2017 Amaitis et al.
9,556,991 B2 1/2017 Furuya
9,604,140 B2 3/2017 Lockton et al.
9,652,937 B2 5/2017 Lockton
9,662,576 B2 5/2017 Lockton et al.
9,662,577 B2 5/2017 Lockton et al.
9,672,692 B2 * 6/2017 Lockton G07F 17/32
9,687,738 B2 6/2017 Lockton et al.
9,687,739 B2 6/2017 Lockton et al.
9,707,482 B2 7/2017 Lockton et al.
9,716,918 B1 7/2017 Lockton et al.
9,724,603 B2 8/2017 Lockton et al.
9,744,453 B2 8/2017 Lockton et al.
9,805,549 B2 10/2017 Asher et al.
9,821,233 B2 11/2017 Lockton et al.
9,878,243 B2 1/2018 Lockton et al.
9,881,337 B2 1/2018 Jaycob et al.
9,901,820 B2 2/2018 Lockton et al.
9,908,053 B2 3/2018 Lockton et al.
9,919,210 B2 3/2018 Lockton
9,919,211 B2 3/2018 Lockton et al.
9,919,221 B2 3/2018 Lockton et al.
9,978,217 B2 5/2018 Lockton
9,993,730 B2 6/2018 Lockton et al.
9,999,834 B2 6/2018 Lockton et al.
10,052,557 B2 8/2018 Lockton et al.
10,089,815 B2 10/2018 Asher et al.
10,096,210 B2 10/2018 Amaitis et al.
10,137,369 B2 11/2018 Lockton et al.
10,150,031 B2 12/2018 Lockton et al.
10,165,339 B2 12/2018 Huske et al.
10,186,116 B2 1/2019 Lockton
10,195,526 B2 2/2019 Lockton et al.
10,226,698 B1 3/2019 Lockton et al.
10,226,705 B2 3/2019 Lockton et al.
10,232,270 B2 3/2019 Lockton et al.
10,248,290 B2 4/2019 Galfond
10,279,253 B2 5/2019 Lockton
10,360,767 B2 7/2019 Russell et al.
10,569,175 B2 2/2020 Kosai et al.
10,653,955 B2 * 5/2020 Lockton H04L 65/4015
10,695,672 B2 6/2020 Lockton et al.
10,709,987 B2 7/2020 Lockton et al.
10,721,543 B2 7/2020 Huske et al.
10,981,070 B2 4/2021 Isgreen
11,154,775 B2 * 10/2021 Lockton A63F 13/537
2001/0004609 A1 6/2001 Walker et al.
2001/0005670 A1 6/2001 Lahtinen
2001/0013067 A1 8/2001 Koyanagi
2001/0013125 A1 8/2001 Kitsukawa et al.
2001/0020298 A1 9/2001 Rector, Jr. et al.
2001/0032333 A1 10/2001 Flickinger
2001/0036272 A1 11/2001 Hirayama
2001/0036853 A1 11/2001 Thomas
2001/0044339 A1 11/2001 Cordero
2001/0054019 A1 12/2001 de Fabrega
2002/0010789 A1 1/2002 Lord
2002/0018477 A1 2/2002 Katz
2002/0026321 A1 2/2002 Faris
2002/0029381 A1 3/2002 Inselberg
2002/0035609 A1 3/2002 Lessard
2002/0037766 A1 3/2002 Muniz
2002/0069265 A1 3/2002 Bountour
2002/0042293 A1 4/2002 Ubale et al.
2002/0046099 A1 4/2002 Frengut et al.
2002/0054088 A1 5/2002 Tanskanen et al.
2002/0055385 A1 5/2002 Otsu
2002/0056089 A1 5/2002 Houston
2002/0059094 A1 5/2002 Hosea et al.
2002/0059623 A1 5/2002 Rodriguez et al.
2002/0069076 A1 6/2002 Faris
2002/0076084 A1 6/2002 Tian
2002/0078176 A1 6/2002 Nomura et al.
2002/0083461 A1 6/2002 Hutcheson
2002/0091833 A1 7/2002 Grimm
2002/0094869 A1 7/2002 Harkham
2002/0095333 A1 7/2002 Jokinen et al.
2002/0097983 A1 7/2002 Wallace et al.
2002/0099709 A1 7/2002 Wallace
2002/0100063 A1 7/2002 Herigstad et al.
2002/0103696 A1 8/2002 Huang et al.
2002/0105535 A1 8/2002 Wallace et al.
2002/0107073 A1 8/2002 Binney
2002/0108112 A1 8/2002 Wallace et al.
2002/0108125 A1 8/2002 Joao
2002/0108127 A1 8/2002 Lew et al.
2002/0112249 A1 8/2002 Hendricks et al.
2002/0115488 A1 8/2002 Berry et al.
2002/0119821 A1 8/2002 Sen
2002/0120930 A1 8/2002 Yona
2002/0124247 A1 9/2002 Houghton
2002/0132614 A1 9/2002 Vanlujit et al.
2002/0133817 A1 9/2002 Markel

(56) **References Cited**

U.S. PATENT DOCUMENTS

2002/0133827 A1 9/2002 Newman et al.
2002/0142843 A1 10/2002 Roelofs
2002/0144273 A1 10/2002 Reto
2002/0147049 A1 10/2002 Carter, Sr.
2002/0157002 A1 10/2002 Messerges et al.
2002/0157005 A1 10/2002 Bunk
2002/0159576 A1 10/2002 Adams
2002/0162031 A1 10/2002 Levin et al.
2002/0162117 A1 10/2002 Pearson
2002/0165020 A1 11/2002 Koyama
2002/0165025 A1 11/2002 Kawahara
2002/0177483 A1 11/2002 Cannon
2002/0184624 A1 12/2002 Spencer
2002/0187825 A1 12/2002 Tracy
2002/0198050 A1 12/2002 Patchen
2003/0002638 A1 1/2003 Kaars
2003/0003997 A1 1/2003 Vuong et al.
2003/0013528 A1 1/2003 Allibhoy et al.
2003/0023547 A1 1/2003 France
2003/0040363 A1 2/2003 Sandberg
2003/0054885 A1 3/2003 Pinto et al.
2003/0060247 A1 3/2003 Goldberg et al.
2003/0066089 A1 4/2003 Anderson
2003/0069828 A1 4/2003 Blazey et al.
2003/0070174 A1 4/2003 Solomon
2003/0078924 A1 4/2003 Liechty et al.
2003/0086691 A1 5/2003 Yu
2003/0087652 A1 5/2003 Simon et al.
2003/0088648 A1 5/2003 Bellaton
2003/0088878 A1 5/2003 Rogers
2003/0114224 A1 6/2003 Anttila et al.
2003/0115152 A1 6/2003 Flaherty
2003/0125109 A1 7/2003 Green
2003/0134678 A1 7/2003 Tanaka
2003/0144017 A1 7/2003 Inselberg
2003/0154242 A1 8/2003 Hayes et al.
2003/0165241 A1 9/2003 Fransdonk
2003/0177167 A1 9/2003 Afage et al.
2003/0177504 A1 9/2003 Paulo et al.
2003/0189668 A1 10/2003 Newman et al.
2003/0195023 A1 10/2003 Di Cesare
2003/0195807 A1 10/2003 Maggio
2003/0208579 A1 11/2003 Brady et al.
2003/0211856 A1 11/2003 Zilliacus
2003/0212691 A1 11/2003 Kuntala et al.
2003/0216185 A1 11/2003 Varley
2003/0216857 A1 11/2003 Feldman et al.
2003/0228866 A1 12/2003 Pezeshki
2003/0233425 A1 12/2003 Lyons et al.
2004/0005919 A1 1/2004 Walker et al.
2004/0014524 A1 1/2004 Pearlman
2004/0015442 A1 1/2004 Hmlinen
2004/0022366 A1 2/2004 Ferguson et al.
2004/0025190 A1 2/2004 McCalla
2004/0056897 A1 3/2004 Ueda
2004/0060063 A1 3/2004 Russ et al.
2004/0073915 A1 4/2004 Dureau
2004/0088729 A1 5/2004 Petrovic et al.
2004/0093302 A1 5/2004 Baker et al.
2004/0152454 A1 5/2004 Kauppinen
2004/0107138 A1 6/2004 Maggio
2004/0117831 A1 6/2004 Ellis et al.
2004/0117839 A1 6/2004 Watson et al.
2004/0128319 A1 7/2004 Davis et al.
2004/0139158 A1 7/2004 Datta
2004/0139482 A1 7/2004 Hale
2004/0148638 A1 7/2004 Weisman et al.
2004/0152517 A1 8/2004 Haedisty
2004/0152519 A1 8/2004 Wang
2004/0158855 A1 8/2004 Gu et al.
2004/0162124 A1 8/2004 Barton et al.
2004/0166873 A1 8/2004 Simic
2004/0176162 A1 9/2004 Rothschild
2004/0178923 A1 9/2004 Kuang
2004/0183824 A1 9/2004 Benson
2004/0185881 A1 9/2004 Lee
2004/0190779 A1 9/2004 Sarachik et al.
2004/0198495 A1 10/2004 Cisneros et al.
2004/0201626 A1 10/2004 Lavoie
2004/0203667 A1 10/2004 Shroder
2004/0203898 A1 10/2004 Bodin et al.
2004/0210507 A1 10/2004 Asher et al.
2004/0215756 A1 10/2004 VanAntwerp
2004/0216161 A1 10/2004 Barone, Jr. et al.
2004/0216171 A1 10/2004 Barone, Jr. et al.
2004/0224750 A1 11/2004 Ai-Ziyoud
2004/0242321 A1 12/2004 Overton
2004/0266513 A1 12/2004 Odom
2005/0005303 A1 1/2005 Barone, Jr. et al.
2005/0021942 A1 1/2005 Diehl et al.
2005/0026699 A1 2/2005 Kinzer et al.
2005/0028208 A1 2/2005 Ellis
2005/0043094 A1 2/2005 Nguyen et al.
2005/0076371 A1 4/2005 Nakamura
2005/0077997 A1 4/2005 Landram
2005/0060219 A1 5/2005 Ditering et al.
2005/0097599 A1 5/2005 Potnick et al.
2005/0101309 A1 5/2005 Croome
2005/0113164 A1 5/2005 Buecheler et al.
2005/0003878 A1 6/2005 Updike
2005/0116416 A1 6/2005 Peterson
2005/0131984 A1 6/2005 Hofmann et al.
2005/0138668 A1 6/2005 Gray et al.
2005/0144102 A1 6/2005 Johnson
2005/0155083 A1 7/2005 Oh
2005/0177861 A1 8/2005 Ma et al.
2005/0210526 A1 9/2005 Levy et al.
2005/0216838 A1 9/2005 Graham
2005/0235043 A1 10/2005 Teodosiu et al.
2005/0239551 A1 10/2005 Griswold
2005/0255901 A1 11/2005 Kreutzer
2005/0256895 A1 11/2005 Dussault
2005/0266869 A1 12/2005 Jung
2005/0267969 A1 12/2005 Poikselka et al.
2005/0273804 A1 12/2005 Preisman
2005/0283800 A1 12/2005 Ellis et al.
2005/0288080 A1 12/2005 Lockton et al.
2005/0288101 A1 12/2005 Lockton et al.
2005/0288812 A1 12/2005 Cheng
2006/0020700 A1 1/2006 Qiu
2006/0025070 A1 2/2006 Kim et al.
2006/0046810 A1 3/2006 Tabata
2006/0047772 A1 3/2006 Crutcher
2006/0053390 A1 3/2006 Gariepy-Viles
2006/0058103 A1 3/2006 Danieli
2006/0059161 A1 3/2006 Millett et al.
2006/0063590 A1 3/2006 Abassi et al.
2006/0082068 A1 4/2006 Patchen
2006/0087585 A1 4/2006 Seo
2006/0089199 A1 4/2006 Jordan et al.
2006/0094409 A1 5/2006 Inselberg
2006/0101492 A1 5/2006 Lowcock
2006/0111168 A1 5/2006 Nguyen
2006/0135253 A1 6/2006 George et al.
2006/0148569 A1 7/2006 Beck
2006/0156371 A1 7/2006 Maetz et al.
2006/0160597 A1 7/2006 Wright
2006/0174307 A1 8/2006 Hwang et al.
2006/0183547 A1 8/2006 Mc Monigle
2006/0183548 A1 8/2006 Morris et al.
2006/0190654 A1 8/2006 Joy
2006/0205483 A1 9/2006 Meyer et al.
2006/0205509 A1 9/2006 Hirota
2006/0205510 A1 9/2006 Lauper
2006/0217198 A1 9/2006 Johnson
2006/0236352 A1 10/2006 Scott, III
2006/0248553 A1 11/2006 Mikkelson et al.
2006/0248564 A1 11/2006 Zinevitch
2006/0256865 A1 11/2006 Westerman
2006/0256868 A1 11/2006 Westerman
2006/0269120 A1 11/2006 Nehmadi et al.
2006/0285586 A1 12/2006 Westerman
2007/0004516 A1 1/2007 Jordan et al.
2007/0013547 A1 1/2007 Boaz

(56) **References Cited**

U.S. PATENT DOCUMENTS

2007/0019826 A1 1/2007 Horbach et al.
2007/0028272 A1 2/2007 Lockton
2007/0037623 A1 2/2007 Romik
2007/0054695 A1 3/2007 Huske et al.
2007/0078009 A1 4/2007 Lockton et al.
2007/0083920 A1 4/2007 Mizoguchi et al.
2007/0086465 A1 4/2007 Paila et al.
2007/0087832 A1 4/2007 Abbott
2007/0093296 A1 4/2007 Asher
2007/0106721 A1 5/2007 Schloter
2007/0107010 A1 5/2007 Jolna et al.
2007/0129144 A1 6/2007 Katz
2007/0147870 A1 7/2007 Nagashima et al.
2007/0162328 A1 7/2007 Reich
2007/0183744 A1 8/2007 Koizumi
2007/0197247 A1 8/2007 Inselberg
2007/0210908 A1 9/2007 Putterman et al.
2007/0219856 A1 9/2007 Ahmad-Taylor
2007/0222652 A1 9/2007 Cattone et al.
2007/0226062 A1 9/2007 Hughes et al.
2007/0238525 A1 10/2007 Suomela
2007/0243936 A1 10/2007 Binenstock et al.
2007/0244570 A1 10/2007 Speiser et al.
2007/0244585 A1 10/2007 Speiser et al.
2007/0244749 A1 10/2007 Speiser et al.
2007/0265089 A1 11/2007 Robarts
2007/0294410 A1 12/2007 Pandya
2008/0005037 A1 1/2008 Hammad
2008/0013927 A1 1/2008 Kelly et al.
2008/0051201 A1 2/2008 Lore
2008/0066129 A1 3/2008 Katcher et al.
2008/0076497 A1 3/2008 Kiskis et al.
2008/0104630 A1 5/2008 Bruce
2008/0146337 A1 6/2008 Halonen
2008/0169605 A1 7/2008 Shuster et al.
2008/0222672 A1 9/2008 Piesing
2008/0240681 A1 10/2008 Fukushima
2008/0248865 A1 10/2008 Tedesco
2008/0270288 A1 10/2008 Butterly et al.
2008/0288600 A1 11/2008 Clark
2008/0315521 A1 12/2008 Reabe, Jr.
2009/0011781 A1 1/2009 Merrill et al.
2009/0094632 A1 4/2009 Newman et al.
2009/0103892 A1 4/2009 Hirayama
2009/0186676 A1 7/2009 Amaitis et al.
2009/0163271 A1 9/2009 George et al.
2009/0228351 A1 9/2009 Rijsenbrij
2009/0234674 A1 9/2009 Wurster
2009/0264188 A1 10/2009 Soukup
2009/0271512 A1 10/2009 Jorgensen
2009/0325716 A1 12/2009 Harari
2010/0099421 A1 4/2010 Patel et al.
2010/0099471 A1 4/2010 Feeney et al.
2010/0107194 A1 4/2010 McKissick et al.
2010/0120503 A1 5/2010 Hoffman et al.
2010/0137057 A1 6/2010 Fleming
2010/0203936 A1 8/2010 Levy
2010/0261533 A1 10/2010 Kryger
2010/0279764 A1 11/2010 Allen et al.
2010/0296511 A1 11/2010 Prodan
2011/0016224 A1 1/2011 Riley
2011/0053681 A1 3/2011 Goldman
2011/0065490 A1 3/2011 Lutnick
2011/0081958 A1 4/2011 Herman
2011/0116461 A1 5/2011 Holt
2011/0124397 A1 5/2011 Gingher
2011/0130197 A1 6/2011 Bythar et al.
2011/0227287 A1 9/2011 Reabe
2011/0269548 A1 11/2011 Barclay et al.
2011/0306428 A1 12/2011 Lockton et al.
2012/0058808 A1 3/2012 Lockton
2012/0115585 A1 5/2012 Goldman
2012/0157178 A1 6/2012 Lockton
2012/0264496 A1 10/2012 Behrman et al.
2012/0282995 A1 11/2012 Allen et al.
2012/0295686 A1 11/2012 Lockton
2013/0005453 A1 1/2013 Nguyen et al.
2013/0072271 A1 3/2013 Ockton et al.
2013/0079081 A1 3/2013 Lockton et al.
2013/0079092 A1 3/2013 Lockton et al.
2013/0079093 A1 3/2013 Lockton et al.
2013/0079135 A1 3/2013 Lockton et al.
2013/0079150 A1 3/2013 Lockton et al.
2013/0079151 A1 3/2013 Lockton et al.
2013/0196774 A1 8/2013 Lockton et al.
2013/0225285 A1 8/2013 Lockton
2013/0225299 A1 8/2013 Lockton
2014/0031134 A1 1/2014 Lockton et al.
2014/0100011 A1 4/2014 Gingher
2014/0106832 A1 4/2014 Lockton et al.
2014/0128139 A1 5/2014 Shuster et al.
2014/0155130 A1 6/2014 Lockton et al.
2014/0155134 A1 6/2014 Lockton
2014/0206446 A1 7/2014 Lockton et al.
2014/0237025 A1 8/2014 Huske et al.
2014/0248952 A1 9/2014 Cibula et al.
2014/0256432 A1 9/2014 Lockton et al.
2014/0279439 A1 9/2014 Brown
2014/0287832 A1 9/2014 Lockton et al.
2014/0309001 A1 10/2014 Root
2014/0335961 A1 11/2014 Lockton et al.
2014/0335962 A1 11/2014 Lockton et al.
2014/0378212 A1 12/2014 Sims
2015/0011310 A1 1/2015 Lockton et al.
2015/0024814 A1 1/2015 Root
2015/0067732 A1 3/2015 Howe et al.
2015/0148130 A1 5/2015 Cibula et al.
2015/0238839 A1 8/2015 Lockton
2015/0238873 A1 8/2015 Amone et al.
2015/0258452 A1 9/2015 Lockton et al.
2015/0356831 A1 12/2015 Osibodu
2016/0023116 A1 1/2016 Wire
2016/0045824 A1 2/2016 Lockton et al.
2016/0049049 A1 2/2016 Lockton
2016/0054872 A1 2/2016 Cibula et al.
2016/0082357 A1 3/2016 Lockton
2016/0121208 A1 5/2016 Lockton et al.
2016/0134947 A1 5/2016 Huske et al.
2016/0217653 A1 7/2016 Meyer
2016/0220908 A1 8/2016 Isgreen
2016/0271501 A1 9/2016 Balsbaugh
2016/0361647 A1 12/2016 Lockton et al.
2016/0375362 A1 12/2016 Lockton et al.
2017/0036110 A1 2/2017 Lockton et al.
2017/0036117 A1 2/2017 Lockton et al.
2017/0043259 A1 2/2017 Lockton et al.
2017/0053498 A1 2/2017 Lockton
2017/0065891 A1 3/2017 Lockton et al.
2017/0098348 A1 4/2017 Odom
2017/0103615 A1 4/2017 Theodospoulos
2017/0128840 A1 5/2017 Croci
2017/0221314 A1 8/2017 Lockton
2017/0225071 A1 8/2017 Lockton et al.
2017/0225072 A1 8/2017 Lockton et al.
2017/0232340 A1 8/2017 Lockton
2017/0243438 A1 8/2017 Merati
2017/0249801 A1 8/2017 Malek
2017/0252649 A1 9/2017 Lockton et al.
2017/0259173 A1 9/2017 Lockton et al.
2017/0264961 A1 9/2017 Lockton
2017/0282067 A1 10/2017 Lockton et al.
2017/0296916 A1 10/2017 Lockton et al.
2017/0304726 A1 10/2017 Lockton et al.
2017/0345260 A1 11/2017 Strause
2018/0001213 A1 1/2018 Tsang
2018/0025586 A1 1/2018 Lockton
2018/0071637 A1 3/2018 Baazov
2018/0104582 A1 4/2018 Lockton et al.
2018/0104596 A1 4/2018 Lockton et al.
2018/0117464 A1 5/2018 Lockton et al.
2018/0140955 A1 5/2018 Lockton et al.
2018/0154255 A1 6/2018 Lockton
2018/0169523 A1 6/2018 Lockton et al.
2018/0190077 A1 7/2018 Hall

(56) **References Cited**

U.S. PATENT DOCUMENTS

2018/0236359	A1	8/2018	Lockton et al.
2018/0243652	A1	8/2018	Lockton et al.
2018/0264360	A1	9/2018	Lockton et al.
2018/0300988	A1	10/2018	Lockton
2018/0318710	A1	11/2018	Lockton et al.
2019/0054375	A1	2/2019	Lockton et al.
2019/0060750	A1	2/2019	Lockton et al.
2019/0143225	A1	5/2019	Baazov

FOREIGN PATENT DOCUMENTS

CA	2279069		7/1999
CA	2287617		10/1999
EP	0649102	A3	6/1996
GB	2364485		1/2002
JP	11-46356		2/1999
JP	11-239183		8/1999
JP	2000-165840		6/2000
JP	2000-217094		8/2000
JP	2000-358255		12/2000
JP	2001-28743		1/2001
JP	2000-209563		7/2008
NZ	330242		10/1989
WO	01/039506	A2	5/2001
WO	01/65743	A1	9/2001
WO	02/03698	A1	10/2002
WO	2005064506	A1	7/2005
WO	2006004855		1/2006
WO	2006004856		1/2006
WO	2007002284		1/2007
WO	2007016575		2/2007
WO	2007041667		4/2007
WO	2008027811	A2	3/2008
WO	2008115858	A1	9/2008

OTHER PUBLICATIONS

Gambling Commission, "Virtual currencies, eSports and social casino gaming-position paper," Mar. 2017, Retrieved on Jan. 22, 2020, http://gamblingcomission.gov.uk/PDF/Virtual-currencies-eSports-and -social-casino-gaming.pdf.

Sipko et al.,"Machine learning for the prediction of professional tennis matches," In: MEng computing-final year project, Imperial College London, Jun. 15, 2015, http://www.doc.ic.ac.uk/teaching/distinguished-projects/2015/m.sipko. pdf.

Winview Game Producer, "Live TV Sports Play Along App WinView Games Announces Sponsorship With PepsiCo to Start This Holiday Season," In Winview Games. Dec. 21, 2016, Retrieved on Jan. 21, 2020 from , http://www. winviewgames./press-release/live-tv-sports-play-along-app-winview-games-announces-sponsorship-pepsico-start-holiday-season/.

International Search Report and the Written Opinion for the PCT/US2019/054859 dated Feb. 4, 2020.

International Preliminary Report dated Apr. 22, 2021 for the application PCT/US2019/054859.

Fantasy sport-Wikipedia.pdf, https://en.wikepedia.org/w/index.php?title=Fantasy_sport&oldid=685260969(Year:2015).

Two Way TV Patent and Filing Map www.twowaytv.com/version4/technologies/tech_patents.asp.

'Ark 4.0 Standard Edition, Technical Overview' www.twowaytv.com/version4/technologies/tech_ark_professionals.asp.

"Understanding the Interactivity Between Television and Mobile commerce", Robert Davis and David Yung, Communications of the ACM, Jul. 2005, vol. 48, No. 7, pp. 103-105.

"Re: Multicast Based Voting System" www.ripe.net/ripe/maillists/archives/mbone-eu-op/1997/msg00100html.

"IST and Sportal.com: Live on the Internet Sep. 14, 2004 by Clare Spoonheim", www.isk.co.usk/NEWS/dotcom/ist_sportal.html.

"Modeling User Behavior in Networked Games byTristan Henderson and Saleem Bhatti", www.woodworm.cs.UML.edu/rprice/ep/henderson.

"SMS Based Voting and Survey System for Meetings", www.abbit.be/technology/SMSSURVEY.html.

"PurpleAce Launches 3GSM Ringtone Competition", www.wirelessdevnet.com/news/2005/jan/31/news6html.

"On the Perfomance of Protocols for collecting Responses over a Multiple-Access Channel", Mostafa H. Ammar and George N. Rouskas, IEEE INCOMFORM '91, pp. 1490-1499, vol. 3, IEEE, New York, NY.

Merriam-Webster, "Game" definition, <http://www.merriam-webster.com/dictionary/agme.pg.1.

Ducheneaut et al., "The Social Side of Gaming: A Study of Interaction Patterns in a Massively Multiplayer Online Game", Palo Alto Research Center, Nov. 2004, vol. 6, Issue 4, pp. 360-369.

http://help.yahoo.com/help/us/tourn/tourn-03.html.

* cited by examiner

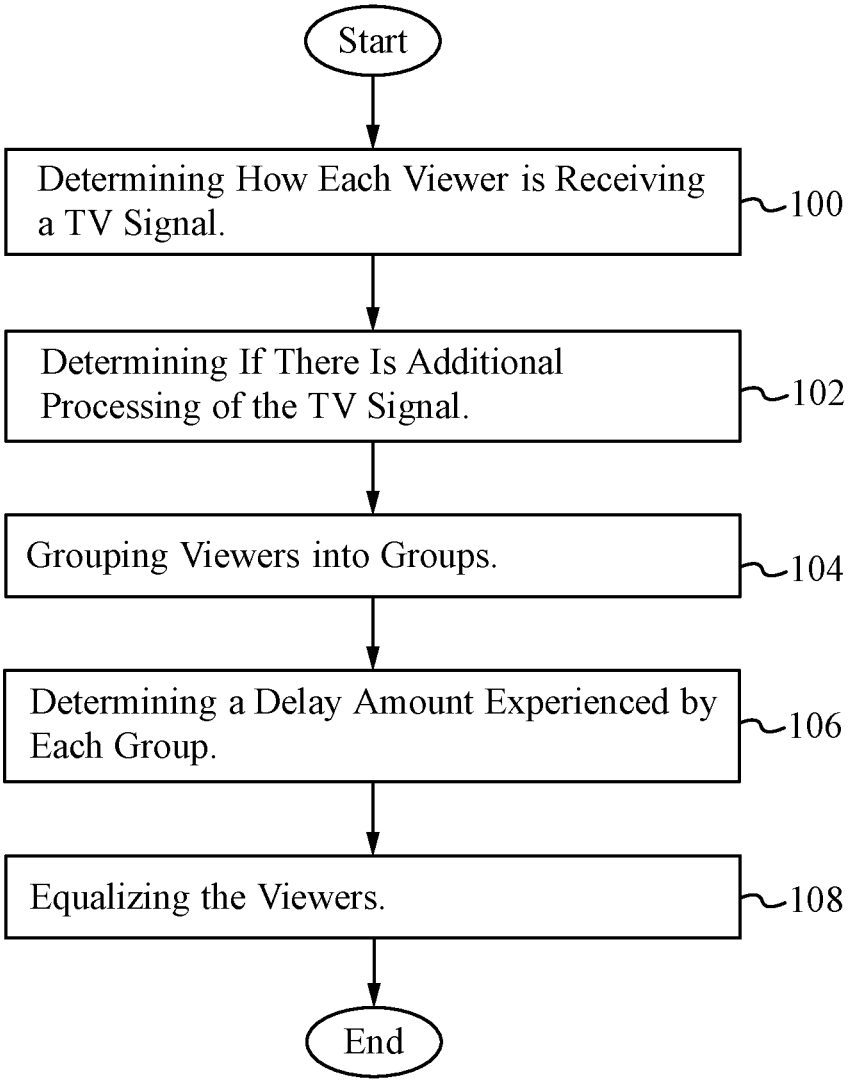

Start
Determining How Each Viewer is Receiving a TV Signal.
100
Determining If There Is Additional Processing of the TV Signal.
102
Grouping Viewers into Groups.
104
Determining a Delay Amount Experienced by Each Group.
106
Equalizing the Viewers.
108
End

Fig. 1

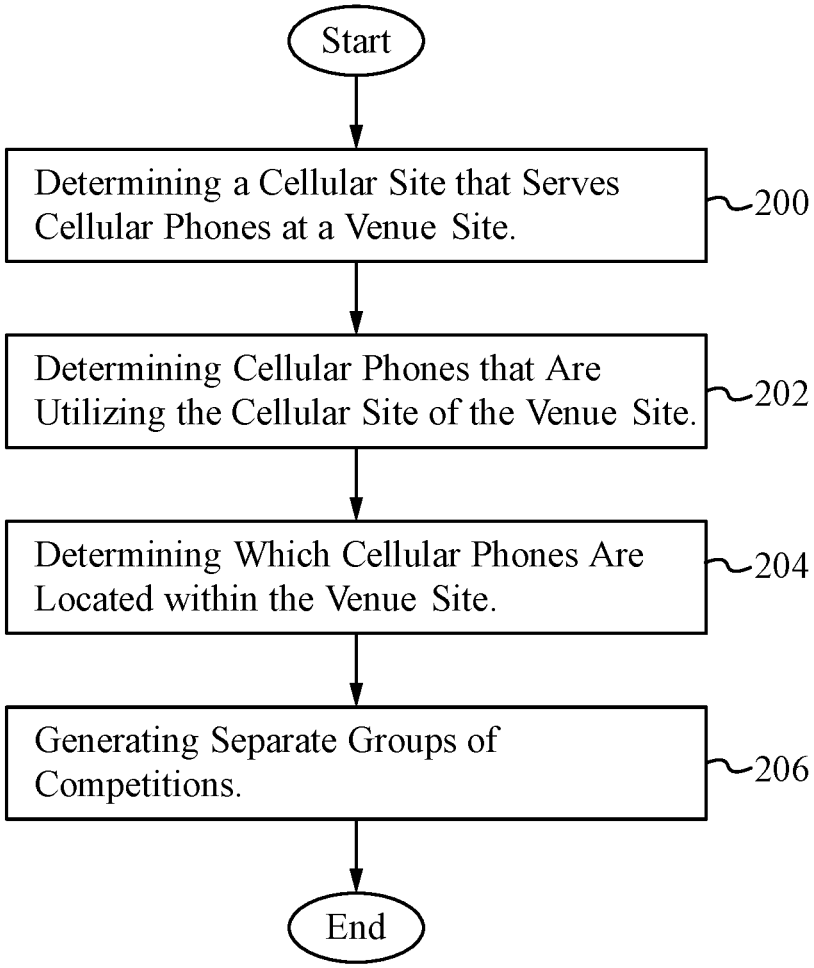

Start
Determining a Cellular Site that Serves Cellular Phones at a Venue Site.
200
Determining Cellular Phones that Are Utilizing the Cellular Site of the Venue Site.
202
Determining Which Cellular Phones Are Located within the Venue Site.
204
Generating Separate Groups of Competitions.
206
End

Fig. 2

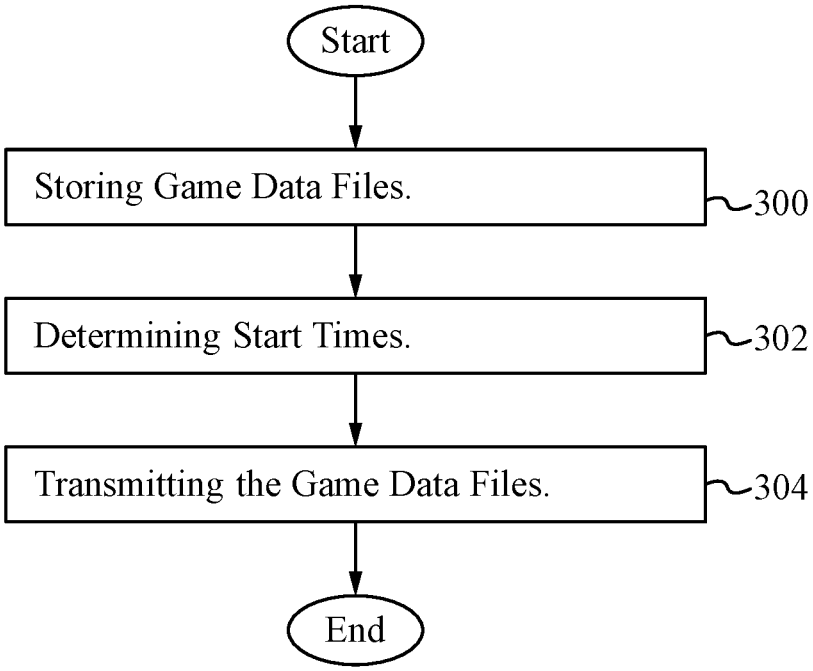

Start
Storing Game Data Files.
300
Determining Start Times.
302
Transmitting the Game Data Files.
304
End

Fig. 3

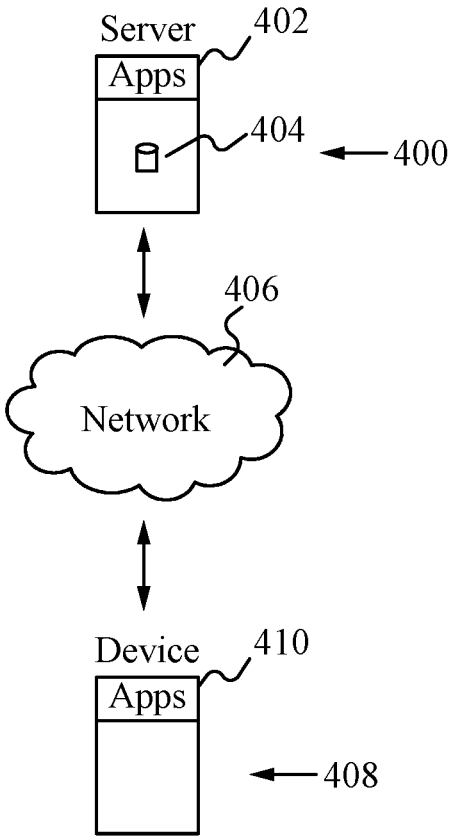


Fig. 4

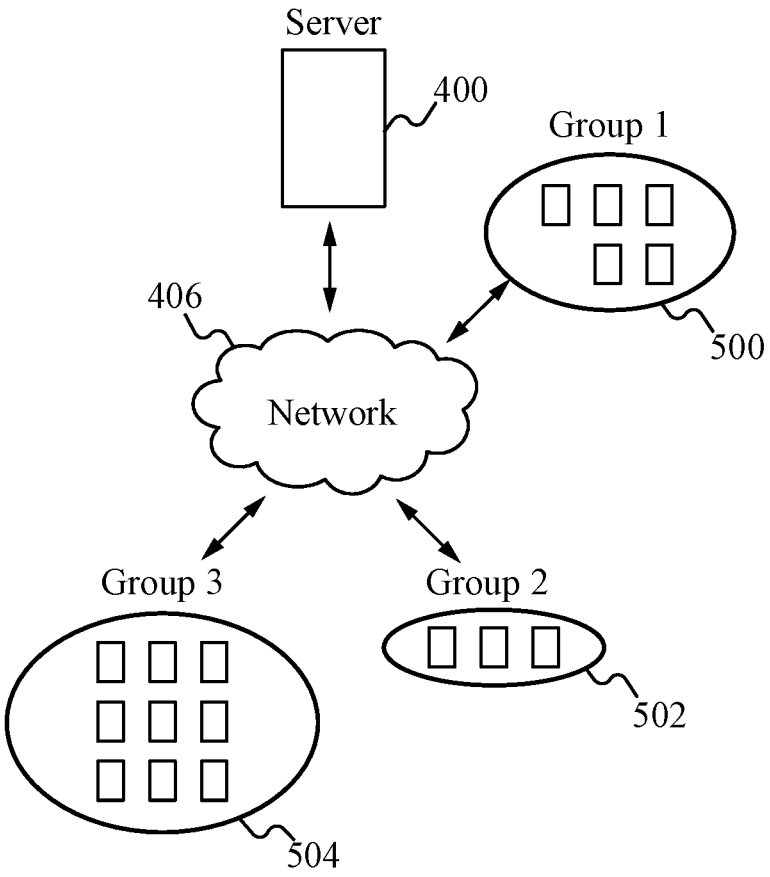


Fig. 5

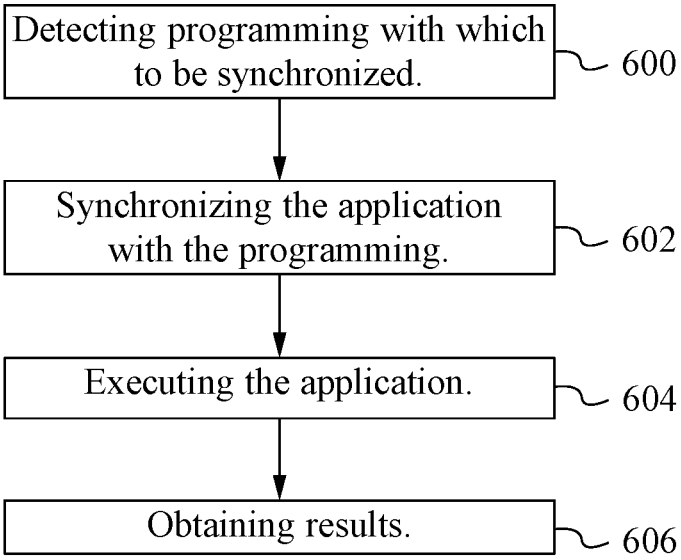

Detecting programming with which to be synchronized.
600
Synchronizing the application with the programming.
602
Executing the application.
604
Obtaining results.
606

Fig. 6

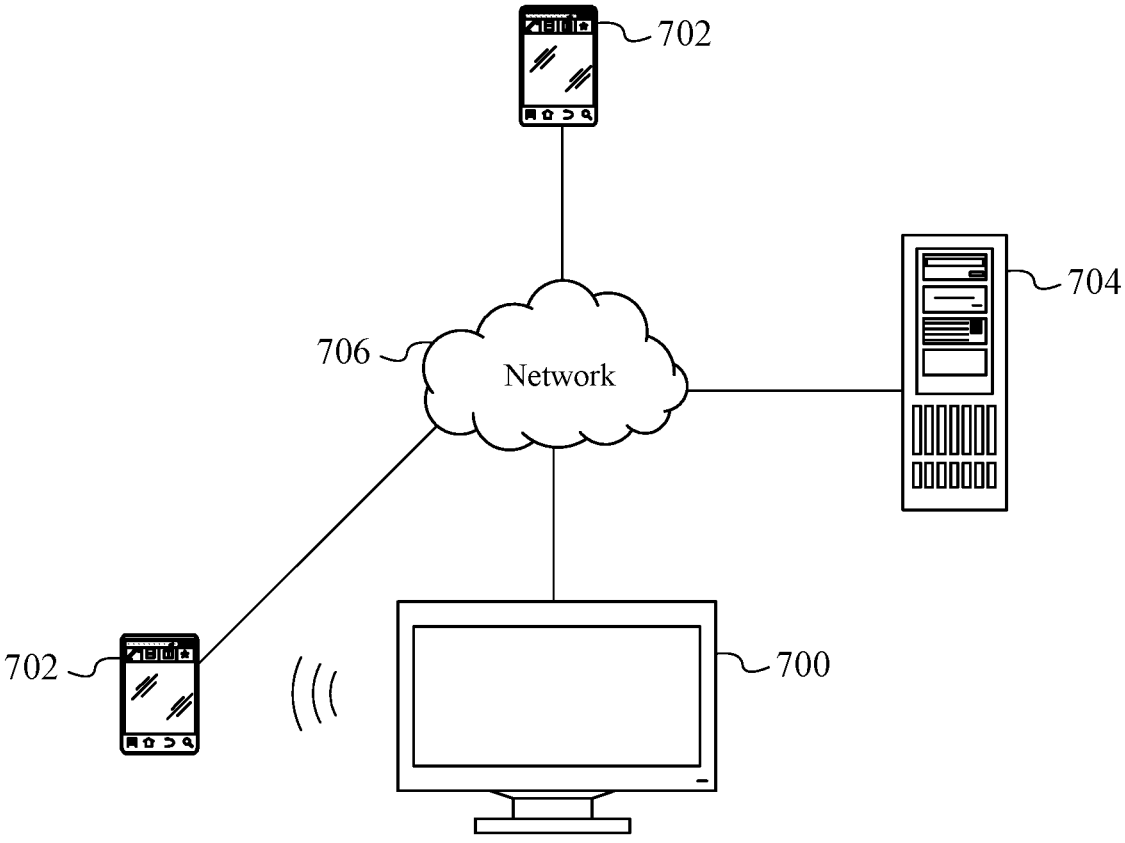

702
706
Network
704
702
700

Fig. 7

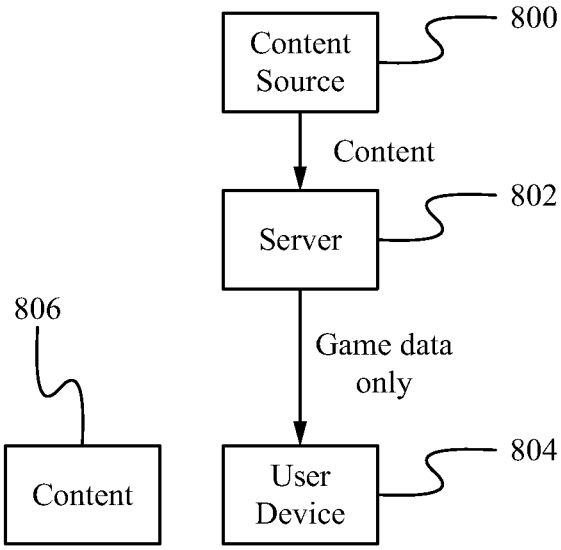

Content Source
800
Content
Server
802
Game data only
806
Content
User Device
804

Fig. 8

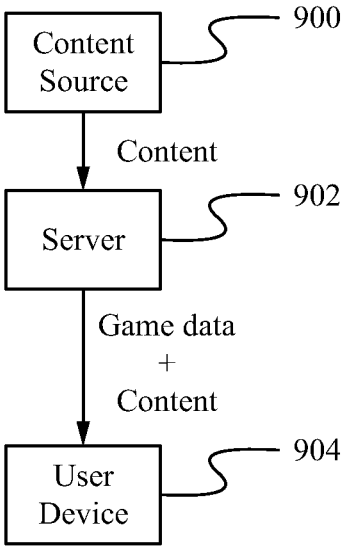

Content Source
900
Content
Server
902
Game data + Content
User Device
904

Fig. 9

SYNCHRONIZED GAMING AND PROGRAMMING

RELATED APPLICATION(S)

This Patent Application is a continuation of U.S. patent application Ser. No. 16/865,000, filed May 1, 2020, titled "SYNCHRONIZED GAMING AND PROGRAMMING," which is a continuation of U.S. patent application Ser. No. 15/886,704, filed Feb. 1, 2018, titled "SYNCHRONIZED GAMING AND PROGRAMMING," which is a continuation of U.S. patent application Ser. No. 15/586,198, filed May 3, 2017, titled "SYNCHRONIZED GAMING AND PROGRAMMING," which is a continuation-in-part of U.S. patent application Ser. No. 14/172,539, filed Feb. 4, 2014, titled "SYNCHRONIZED GAMING AND PROGRAMMING," which is a divisional of U.S. patent application Ser. No. 13/484,129, filed May 30, 2012, titled "SYNCHRONIZED GAMING AND PROGRAMMING" which is a continuation-in-part of U.S. patent application Ser. No. 13/403,845, filed Feb. 23, 2012, titled, "A METHODOLOGY FOR EQUALIZING SYSTEMIC LATENCIES IN TELEVISION RECEPTION IN CONNECTION WITH GAMES OF SKILL PLAYED IN CONNECTION WITH LIVE TELEVISION PROGRAMMING" which is a continuation of U.S. patent application Ser. No. 11/786,992, filed Apr. 12, 2007, titled, "A METHODOLOGY FOR EQUALIZING SYSTEMIC LATENCIES IN TELEVISION RECEPTION IN CONNECTION WITH GAMES OF SKILL PLAYED IN CONNECTION WITH LIVE TELEVISION PROGRAMMING," which claims priority under 35 U.S.C. § 119(e) of the co-owned U.S. Provisional Patent Application No. 60/791,793, filed Apr. 12, 2006, and titled "A METHODOLOGY FOR EQUALIZING SYSTEMIC LATENCIES IN TELEVISION RECEPTION IN CONNECTION WITH GAMES OF SKILL PLAYED IN CONNECTION WITH LIVE TELEVISION PROGRAMMING" which are also all hereby incorporated by reference in their entireties.

The U.S. patent application Ser. No. 15/586,198, filed May 3, 2017, titled "SYNCHRONIZED GAMING AND PROGRAMMING," is also a continuation-in-part of U.S. patent application Ser. No. 15/332,625, filed Oct. 24, 2016, titled "CELLULAR PHONE GAMES BASED UPON TELEVISION ARCHIVES," which is a continuation of U.S. patent application Ser. No. 11/542,335, filed Oct. 2, 2006, titled "CELLULAR PHONE GAMES BASED UPON TELEVISION ARCHIVES," which claims priority under 35 U.S.C. § 119(e) of the co-owned U.S. Provisional Patent Application No. 60/723,301, filed Oct. 3, 2005, and entitled "CELLULAR PHONE GAMES BASED UPON TELEVISION ARCHIVES" which are both also hereby incorporated by reference in their entireties.

FIELD OF THE INVENTION

The present invention relates to the field of distributed gaming. More specifically, the present invention relates to the field of distributed gaming utilizing a mobile device.

BACKGROUND OF THE INVENTION

In the United States alone there are over 230 million registered cellular phones. With the expiration of the U.S. Pat. No. 4,592,546 to Fascenda and Lockton, companies are able to now use the cellular phone and other mobile communication devices utilizing a multicast network to control

television viewers in games of skill based upon predicting, for example, what the quarterback may call on the next play within a football game. Both prime time and programs syndicated on a market-by-market basis lend themselves to games of skill. In addition, games of skill with a common start time can be conducted simultaneously among cellular phone owners, based on classic card, dice, trivia, and other games. In order to avoid the anti-gaming laws in the various states, the winners must be determined by the relative skill, experience and practice of the player in each discrete game.

U.S. Pat. No. 5,813,913 ('913) to Berner and Lockton provides for a central computing system which includes a means of grouping participants having similar skill levels together in simultaneous, but separate, levels of competition playing an identical game. The relative performances are communicated to only those participants competing at the same skill level. The '913 patent also provides for a wireless receiving device to permanently store the specific skill level for each participant for each type of common event such as those based on televised sports or game shows. The '913 patent provides for a telephonic link at the completion of the game to collect information and update the skill level of the participants of a particular game. When a person achieves sufficient points or meets other objective criteria to graduate into another skill level, a method is provided for accomplishing this in the central computer and then transmitting an alert to the participant notifying them of their promotion. The '913 patent describes awarding prizes and providing recognition for the members of each discreet skill level in a common game. All users, no matter what level they are on, receive the same number of questions and thus the possibility of earning the same number of points. Thus direct comparisons between users at different levels, although not encouraged are possible. Such comparisons between players of disparate skills can lead to user discouragement.

Games of skill and chance have an intrinsic excitement and entertainment value. Any game is greatly enhanced by a participant's ability to know how their performance compares in relation to other participants and/or to historical performance for the game throughout the contest. As with any game of skill, competition among friends, or with strangers of similar experience, or the ability at ones option, sometimes for an extra consideration, to compete in a separate team or individual contest, offers the opportunity of increased enjoyment and prizes.

Games of skill that rely on participation by watching an event on a television have potential latency issues since television signal reception is not synchronized nationwide. For example, a participant in Texas using a satellite dish network may experience a 3 second delay compared to an individual in California using a cable network. Live streams via the Internet of events utilizing a TV set or other display offer an alternative method of viewing televised events. The signal compression process creates systemic propagation delays that are often significant. Also, there are delays between individuals attending a game live and those watching the game live on television. Furthermore, for taped programs, both those shown to viewers in time zones or those syndicated on a market-by-market basis, there are potential delay issues as experienced with the live broadcasts in addition to other possible differences in timing of the broadcasts. Therefore, to maintain user enjoyment and fairness for all participants, these delays must be neutralized.

SUMMARY OF THE INVENTION

To encourage viewer participation, games, contests and social interactions are able to be synchronized with pro-

gramming such as television shows or commercials utilizing a second screen such as a cell phone, iPad® or laptop computer. The programming is able to be television programming, Internet programming (e.g. a streamed video displayed on a webpage or mobile device) or any other programming. The gaming is able to be any game such as a game of skill or chance, for example, betting on the outcome of a soccer penalty kick, where legal.

BRIEF DESCRIPTION OF THE DRAWINGS

FIG. **1** illustrates a flowchart of a process of preventing latency issues from giving an advantage to some participants.

FIG. **2** illustrates a flowchart of a process of preventing participants at a live event from having an unfair advantage over participants watching on television.

FIG. **3** illustrates a flowchart of a process of handling latency issues for taped programs.

FIG. **4** illustrates a graphical representation of an embodiment of the present invention.

FIG. **5** illustrates a graphical representation of a network of devices of the present invention.

FIG. **6** illustrates a flowchart of a method of implementing a game synchronized with programming according to some embodiments.

FIG. **7** illustrates a system for implementing a game synchronized with programming according to some embodiments.

FIG. **8** illustrates a system for implementing a game synchronized with programming according to some embodiments.

FIG. **9** illustrates a system for implementing a game synchronized with programming according to some embodiments.

DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENT

U.S. Provisional Patent Application No. 60/692,356, filed Jun. 20, 2005, and entitled "SYSTEMS AND METHODOLOGIES ENABLING A CELL PHONE BASED SUBSCRIPTION SERVICE OFFERING A VARIETY OF SCHEDULED GAMES IN CONNECTION WITH LIVE TELEVISION PROGRAMMING," is incorporated by reference herein.

Three separate classes of latency issues for the length of time it takes a television signal to reach a viewer in producing real-time entertainment such as games of skill synchronized with television programming are addressed. The latency issues are: 1) systemic propagation delays in the delivery of a television signal to a receiver, 2) arbitrarily imposed delays on a broadcast television signal and 3) variances in precise broadcast times of segments of taped television programs between local and national commercials, sold through syndication to individual television stations.

Systemic Propagation Delays

There are specific challenges facing a service comprised of games or other entertainment played by remote participants utilizing cellular phones or the Internet, in connection with a live or taped telecast. Examples are live baseball, basketball and football games, taped game shows such as Wheel of Fortune™ and Jeopardy™ or other television programming such as predicting the winners of the Oscars. In a game of skill, for example, fair competition necessitates that a fast paced game, based on the unfolding television action has a level playing field for all participants regardless of how they receive their television signal. Propagation delays result from, among other things, the number of satellite hops required to deliver the signal, the method of processing and rebroadcasting the signal after it is received by cable systems head ends or an over the air broadcast television station, and whether or not the signal is further processed for high definition television. Furthermore, digital television recording systems (DVRs) such as TiVo™ are also able to generate delays in the viewing of the picture after receipt via satellite or cable. These delays are able to result in a difference between the first signal received and the last received of more than several seconds.

People have an unsatisfactory experience and/or others are able to gain a potential competitive advantage from the variances in the exact time one viewer sees an event on their television versus another competitor who receives their television signal through a different delivery path. This is a challenge faced in Europe where over 65 million TV viewers participate in "In Game" wagering on televised sporting events. In the U.S., the 120 million television homes receive their signal either through an over the air broadcast, cable system or via satellite delivery. Each delivery system can impose propagation delays of various time lengths. If the delay between the time a viewer with the least amount of delay and the person receiving the signal with the greatest amount of delay exceeds several seconds, some inequalities in game experience and play are able to result.

One example is a game of skill based upon a football telecast, wherein competitors predict the play that the coaches and/or quarterback call prior to the snap of the ball. The competitor's prediction is based among other things on their observation of the down, distance and the offensive and defensive formations on the field and tendencies of the teams in these situations. Such a game utilizes a "lock out" signal, as described in the U.S. Pat. No. 4,592,546 to Fascenda, entitled "Game of Skill Playable by Remote Participants in Conjunction with a Live Event," which is incorporated by reference herein, to prohibit the entry of predictions after the competitor sees the play begin to unfold, at the snap of the ball. The time stamped "lock out" signal is generated by a game producer also viewing the same telecast from a different location. If the game producer is viewing a television signal several seconds before some competitors and generating a time stamp based on that event, an advantage is able to result if the difference in the time stamp and the receipt of the "lock out" signal is more than several seconds earlier in relation to another competitor's television signal which is delayed. During this period of time, for example, on a first or second down situation, a competitor receives the "lock out" just as the quarterback receives the snap and the corresponding television signal at the same time as the game producer while another competitor with a delayed television signal, receives a "lock out" signal while the quarterback is approaching the line of scrimmage. In another example, if the game producer is viewing a signal after a viewer, a competitor might see the quarterback start to drop back into a "shot gun" formation, making the likelihood of a pass considerably higher. This latter player might have time to change his prediction from, "run" to "pass" before receiving a "lock out" generated at the snap of the ball. A person consistently receiving a "lock out" later than another competitor might, through the course of the game, gain some competitive advantage.

While it is not clear that sufficient enough competitive advantage is gained between a competitor receiving his "lock out" signal precisely at the snap of the ball and one

who is locked out a few seconds prior to the snap of the ball, this discrepancy could present the appearance of a playing field that is not level, and one of the primary benefits of the system addressed herein is to ensure the competitors feel they are on equal footing.

The above described issue is solved through a system and method to effectively equalize systemic propagation delay variances to a required level dictated by the demands and rules of a particular game, so that a material competitive advantage is not obtained and the user experience is optimized for all players.

The solution first relies on the determination of how each viewer is receiving their television signal (e.g. via an over the air broadcast in a metropolitan area, via a particular cable system, a particular satellite system, or through an Internet delivered live stream). All subscribers to a particular service provider or who are receiving an over the air broadcast in a specific metropolitan area will receive the signal at their location at the same time. It is also able to be determined if there is further processing of the signal within the homes, office, bar and others, which could further increase the total length of the propagation delay. Examples would be the use of a DVR, such as TiVo™. A variety of methodologies are able to be utilized to determine the time difference between the reception of the television picture being utilized by the central game production facility where "lock out" signals are generated and each separate group of viewers around the country or around the world.

For this system, the total viewing population for a telecast is divided into segments or blocks of viewers referred to as "cohorts." For example, the 2 million inhabitants of the San Francisco Bay Area would be divided into approximately 1 over the air broadcast, 3 satellite independent providers and several cable "head ends" or central broadcast points serving a "cohort." This information would be gathered at a central game server, and all players registered to play in a particular contest would be assigned to a specific cohort of viewers.

The following are some methodologies for determining the delays experienced by various cohorts who are able to be used in combination or separately.

In one methodology, upon joining the service and prior to initial game play, subscribers and competitors are required to identify the method by which they receive their television signal and identify the cable or satellite service provider and answer questions relative to whether or not they subscribe to an analog or digital high definition service or utilize a DVR. This information is able to be verified by sending questions to their cellular phones concerning commercials, station breaks and the precise time they are viewed or utilizing other information only seen by members of that cohort.

In another methodology, a routine is established upon entry into the game where the individual viewer is asked to mark the precise time a predetermined audio or visual event in the television program occurs, such as the initial kickoff, which would establish the deviation of their receipt of their television picture from the television signal utilized by the game producers. While some viewers might attempt to cheat by delaying their input, the earliest entries from the cohorts in this group would be averaged to establish the accurate delta between the receipt of the telecast by the production crew and those in each discrete sub group of viewers.

In another methodology, the GPS function in the cellular phone is used to determine the physical location of a viewer which is matched to a database of cable lead ends or over the air broadcast stations available to a consumer in that precise location.

In another methodology, employees of the game producer who are members of the subgroups which constitute the competitors/viewers, e.g. a subscriber to Comcast Cable in San Francisco, are utilized by the game service provider. These individuals would provide the current propagation delay information sent to the game server utilizing their identification of a recognizable event they observe on their television set, such as the initial snap of the ball.

In another methodology, an event is streamed via an Internet connection, where a game control system measures the compression caused delay in signal delivery for separate sources and appropriately adjusts the game control data to individually synchronize with the separate sources of the televised event.

In another methodology, audio or video artifacts or information done in cooperation with the television signal provider are inserted which must be immediately responded to by the competitor to verify the source of their television signal or monitored at cooperative viewers' television sets.

In another methodology, the various delays through an automated system linked to the game server, which continuously samples the audio or video track of the underlying satellite, cable or over the air broadcast television signals are established around the country to provide the information of the precise arrival of the underlying television picture.

Utilizing software resident in the game control server, game control data for each set of viewers/competitors of the game in progress who are receiving their television picture through the same source are batched together by the game control server, and the appropriate delay is either time stamped on the game "lock out" signals, or is imposed on the entire data stream so that competitors receiving their television information slightly behind or ahead of others gain no material competitive advantage. Another method is for the game control server to send all the game control data to all of the viewers/competitors of the game at the same time, and the client software is able to delay the presentation of the game data based on the viewers' cohort.

Utilizing these methodologies to measure the delays in each cohort, each cohort of viewers would have artificial time delays on the game control information imposed by the game control server, which would substantially equalize the receipt of "lock out" data relative to the event triggering the "lock out," based on the underlying television programming, for example, the snap of the football. Players receiving the television signals in advance of the one with the slowest receipt of the television signal would receive "lock out" signals slightly delayed or time stamped with a slightly later time as described in U.S. Pat. No. 4,592,546. By providing a correspondingly delayed lock out to a viewer receiving their signal later, a potential advantage is mitigated.

Alternatively, this time equalization from cohort to cohort could, for example, involve artificially delaying the transmission of the game control data stream sent to all competitors cell phones or other mobile devices by the appropriate amount of seconds, to sufficiently minimize the advantage a player with a few more seconds of television based information would have. For example, by time stamping the "lock out" signal at an earlier event, such as when the team breaks from the huddle, the chance of some cohorts seeing the actual beginning of the play is eliminated and the discrepancy in propagation delay provides little or no advantage.

FIG. **1** illustrates a flowchart of a process of preventing latency issues from giving an advantage to some participants. In the step **100**, it is determined how each viewer receives a television signal, where possibilities include an

over the air broadcast, a particular cable system or a particular satellite system. In the step **102**, it is determined if there is additional processing of the television signal when after the signal enters a viewer/participant's house, office, bar or other location from an item such as a DVR. In the step **104**, the viewers/participants are grouped into groups also referred to as cohorts. In the step **106**, a delay amount is determined for each group. The delay amount is able to be determined by the one or more methods as described above. In the step **108**, the viewers/participants are equalized. The methods of equalization vary, but some examples include time stamping on the game "lock out" signals, imposing a time stamp on the entire data stream so that competitors receiving their television information are slightly behind or ahead of others gain no material competitive advantage. Another method is for the game control server to send all the game control data to all of the viewers/participants of the game at the same time, and the client software is able to delay the presentation of the game data based on the viewers' group.

Arbitrarily Imposed Delays on the Broadcast of the Signal and the Physically Present Competitor

As a result of the Janet Jackson half time show episode at the 2004 Super Bowl, some networks have announced their intentions to impose up to a 7 second delay on telecasts of live sporting events. More recently an obscenity uttered by a competitor at the conclusion of a live NASCAR race has resulted in another network announcing it may impose a 5-7 second delay on future broadcasts of NASCAR races. These arbitrarily imposed delays are a significantly longer duration than those resulting from the above described propagation delays of the broadcast television or cellular network control information.

A distinct advantage is able to arise for a game player who is physically present at an event being televised which is the basis of a contest of skill in the home, or other location, separate from the live game venue. This is because in certain instances they will receive "lock out" signals generated for competitors among the television viewing audience, particularly if the game producer is not physically present at the venue, but producing by viewing a telecast. This discrepancy would permit prediction entry as much as 7 seconds later than those watching an artificially delayed television picture. This magnitude of delay can result in a significant competitive advantage for the game player who is physically present. For example, a soccer or hockey contest of skill might contain an element where a competitor is given a limited number of opportunities to predict if there will be a "shot on goal" within the next 5 seconds. The 5 second advantage to the competitor physically present would be significant, because the receipt of a lockout signal generated for the huge television audience could occur after a shot had occurred.

In a contest based on a football game, a competitor present at the stadium would receive their "lock out" signals after the play was underway and could often determine whether the play was a pass or a run prior to receipt of the lockout signal. It is also likely that other live televised events such as The Oscars, Grammy's, beauty contests and other television programming that can support games of skill would impose delays on the telecast for the same or different reasons, also providing the opportunity for a competitive advantage for those who are attending the event in person.

The cellular telephone system currently has methodologies to determine a user's physical location. The 911 emergency laws mandate the cellular systems to have the capability of determining the location of a 911 emergency caller within 150 feet. More sophisticated approaches combine cellular site location technology with geosynchronous positioning satellite capabilities. Companies like Qualcomm™ have implemented various location technologies such as Snaptrack, SnapSmart and Snapcore, which provide a cellular phone's physical location within a matter of yards.

For each televised live event, the physical venue for this event would be known by the organizer of a game of skill in advance. Therefore, it is possible to determine for each contest of skill the specific cellular sites which will serve cellular phone owners physically present at that venue. A methodology is employed to identify all of the cellular phones logging into the game server registering to play the game of skill which are co-located within cellular sites servicing the stadium or auditorium where the televised live event is taking place. A communication methodology between the cellular carrier and the game control computer software contained in the game application resident on a game competitor's phone is able to be used, which would identify the cellular phone physically in the stadium.

Before the start of the contest of skill, the system informs the central computer of the game selected to be played by each competitor, for example, the San Francisco 49ers versus the New York Giants. The central game control server's software would hold current information on the physical location of the stadium of each game, for example, Candlestick Park in South San Francisco, and the cellular sites covering this location. The software resident on the cellular phone or on the server then identifies the phone as one located physically at the telecast game's venue.

To ensure that potential competitors at the live venue are able to also compete in a contest of skill, the central game server will separate the scoring data and game control data for competitors using these cellular phones in this specific location from the general pool of competitors who are not so located, but watching the game via television. A separate contest is then generated and scored for those competitors who have the advantage of viewing the event live, and a separate prize pool is awarded. This separate game would be produced though the observation of the actual game physically at the venue or through the operation of a non-delayed satellite feed.

If it is ultimately determined that certain groups of television viewers, as opposed to live event attendees, who are competitors in these games of skill are gaining sufficient enough competitive advantage, segregating those players at the extreme ends of the propagation delays, into two or more separate contests with separate sets of prizes, may also be employed as described above. For example, separate contests for satellite viewers versus cable and over the air viewers are able to be generated.

FIG. **2** illustrates a flowchart of a process of preventing participants at a live event from having an unfair advantage over participants watching on television. In the step **200**, a cellular site that serves cellular phones at a venue site is determined for each contest of skill. For example, if a game of skill is played for a game between the San Francisco 49ers and the Oakland Raiders at Candlestick Park in South San Francisco, a specific cellular site serves the cellular phones in that location. In the step **202**, the cellular phones that are utilizing the cellular site of the venue site and are participating in the game of skill for that event are determined. For example, if there are 1,000 cellular phone users in Candlestick Park who register to play in a game of skill involving the 49ers and the Raiders, they are detected by the system. In the step **204**, it is determined if the cellular phone is located within the venue site. The determination is made by

comparing the current cellular information with information stored on a server indicating the location of each venue such as Candlestick Park. Based on the determination in the step **204**, separate groups are generated in the step **206**. A group is generated for users that are located at the live venue, and a group is generated for those players that are watching live on television. Therefore, the live players who do not experience any delay compete against each other, and television viewers compete with others television viewers who have a delay.

In addition to implementing the above-mentioned solutions to latency issues, additional groups are able to be generated if the delays between signal providers are not resolved. For example, all viewers with satellite television signals compete against each other, and all cable television viewers compete against each other, with no cross competition.

Taped and Syndicated Television Programs

A separate but related latency problem arises in the case of syndicated television shows, which are by necessity pre-taped. Examples are game shows like Wheel of Fortune™ and Jeopardy™. These pre-recorded television game shows are generally syndicated, meaning they are sold to a specific television station on an exclusive lease for the local television market served by the station's signal. The television stations generally air these half hour episodes at various times in "prime time access," which is generally considered between 6-8 pm. Therefore, with 3 different time zones in the United States, the start times will differ from market to market. In addition, the precise time each commercial bracketed television show segment that is broadcast is able to vary by a few seconds based on the time each station's engineering personnel starts the show's segments after the insertion of local and national commercials. Thus, for a show like Jeopardy™, there might be over 100 separate slightly different broadcasts from a time standpoint for a single episode of Jeopardy™ on a given day. In addition, these syndicated telecasts can also experience the same propagation delays as described above.

Contests of skill on cellular phones around these syndicated telecasts are produced with the cooperation of the game show producers, and game data files are produced which are precisely time-synchronized to the final video tape of the television game show. These files must be precisely synchronized and a delay of just a few seconds could give an unfair competitive advantage to a viewer who is receiving their "lock out" signal later than another competitor in a fast paced game like Jeopardy™. The game data files must be synchronized with the television show at the beginning of the program and again as the show returns to the game competition from each commercial break.

This solution addresses the separate, but related problems of synchronizing game data files with the broadcast of prerecorded and syndicated games, entertainment, reality or other television programming that is aired in different time zones at the choice of the purchasing television station. As opposed to live sporting events, the game production for this genre of programming is not done live through real-time observation of the unfolding telecast but is produced in advance with the cooperation of the show producer as a time synchronized file utilizing the final edited for broadcast, television program.

In general, the game data files are divided into separate "segments" which comprise the entire television program and aired between the insertion of national, regional and local advertising. As the television program returns from the opening commercials, the initial game or entertainment segment is launched by the game producer, synchronized to the playing of the television tape, and the data files for this segment would end with the first commercial break. The other game "chapters" are resynchronized as each segment of the telecast resumes from commercial break. The local telecasts might have variations of anywhere from 1 to 5 seconds, or more, resulting from the use of different commercials by different stations, and the variances in the local production by the engineering management of the syndicated telecasts.

A system first determines all of the separate and unique television markets where the cellular phone service will be offered in connection with a syndicated, taped version of an underlying television program, for example, Jeopardy™. Network broadcasts usually air in three separate time zones. This information is available from the shows syndicator, for example, Jeopardy™, the syndicator King World™ or Sony™, the show's licensor. This information is also publicly available through the various television guides. The game production servers hold the pre-produced game data files to be broadcast to the cellular phones of the participating subscribers, containing, for example, the correct answers and possibly some intentionally wrong multiple choice answers in the case of Jeopardy™ or other multiple choice based game shows. The server begins the broadcast of its time synchronized files for each discrete telecast of a single television program at a precise start point for each "segment" or chapter. With knowledge of the precise timing of the discrete segments of the broadcast, for each separate syndicated market, the server transmits the pre-recorded files in most cases, at a slightly separate and different time to each viewer who is viewing the telecast in a particular market via a particular broadcast, satellite or cable signal.

The precise start times of the beginning episode of a game show and the start times of the other segments, beginning as the show resumes after a national and local commercial are delivered to the server through various methodologies.

One methodology requires the cooperation of an employee of the game provider based on visual observation of the telecast for that market, or being physically present at the event venue, utilizing a personal computer and the Internet, or by utilizing their local cellular phone, all coupled to the game server.

Another methodology includes utilizing an audio or video recognition system with online access to the broadcast of the underlying television program for each separate market which provides real-time tracking of the television broadcast to the game control server, ensuring the game data file is able to be precisely synchronized to the television picture. Information is also able to be inserted in a Vertical Banking Interval (VBI) of the taped syndicated show and tracked online in real time by the game control server. For remote telecasts and online connection from a remote device, reading data embedded in the VBI via a high speed connection to the central game server is utilized. Utilizing some of the procedures outlined above, the propagation delays in the receipt of the cellular transmissions are also monitored and the game server adjusts the data files containing the "lock outs" to accommodate the systemic delay in the delivery of the game data on the cellular networks.

Another methodology, with the cooperation of the producers of game shows, precise audio or video events in the telecast could either be added to the video, such as a visible count down, or existing events in the telecast identified by the producers as synchronization points which the competitors could utilize as start points for the previously downloaded data files at the press of an appropriate button on their

cellular phone. This would trigger the launch of a program previously downloaded to the phone's RAM. Then, time synchronization would be launched.

One more methodology uses an audio signal, possibly sub-audible to humans, which is inserted into the taped audio track recognizable by the audio receiver in a cellular phone which would be utilized to start and/or continually keep the pre-produced data files resident on the cellular phone in synchronization with the telecast.

FIG. **3** illustrates a flowchart of a process of handling latency issues for taped programs. In the step **300**, pre-produced game data files are stored in servers; preferably, game production servers. The game data files include information required to participate in a game such as questions and answers for a trivia game like Jeopardy™. In the step **302**, start times are determined for each discrete telecast of a show. The start times are determined as described above, such as with the cooperation of a game provider employee, utilizing an audio/video recognition system, using a visible count down or a recognizable signal which is able to be recognized by a cellular phone. Other ways of determining start times are possible as well. In the step **304**, the game data files are transmitted at appropriate times based on the start times for each separate market. Furthermore, if additional delays are recognized, such as those delays described above, that is able to be accounted for.

FIG. **4** illustrates a graphical representation of an embodiment of the present invention. A server **400** contains applications **402** and a storage mechanism **404**. The applications **402** include an application to generate and modify game control data. The game control data is eventually transferred to users' cellular phones. If necessary the game control data is synchronized and time-stamped for each group, so that, as described previously, there are no unfair advantages for the competitors. A location application stored on the server **400** is able to determine which cellular phones are logged into the server **400** and what their location is. A grouping application is able to separate information such as scoring data and game control data into different groups. The grouping application also separates the cellular phones into groups or cohorts as described above. The storage mechanism **404** is utilized for storing the applications **402** in addition to selections and results. The storage mechanism **404** preferably includes a database for organizing the data including the selections, results, standings and groups amongst other data needed for executing the competitions. The server **400** is part of a network **406**. A device **408** couples to the server **400** through the network **406**. In some embodiments the network **406** includes the Internet. In some embodiments, the network **406** includes a cellular network. Also, in some embodiments, the network **406** includes both the Internet and a cellular network. The device **408** is preferably a cellular phone. In other embodiments a PDA, a computer, a laptop or any other device capable of communicating with the server **400** is possible. The device **408** stores a variety of applications **410**. A game application is stored on the device **408**. In some embodiments, software to identify the physical location of the device **408** is stored on the device **408**. The device **408** also receives the game control data which ensures no competitors have an unfair advantage using the methodologies described above. Furthermore, the device **408** receives game data which is used to play the games. An example of game data includes Jeopardy™ multiple choice answers. Additional applications are able to be included on the server **400** and on the device **408**, as necessary, for smooth operation of the games. Although some of the applications are described separately above, in some embodiments, the applications are included in one large application.

FIG. **5** illustrates a graphical representation of a network of devices of the present invention. A server **400** is coupled to many devices through a network **406**. The devices are grouped into groups or cohorts as described above. For example, Group 1 of devices **500** includes a set of devices that receive a television signal through cable with a delay time of x. Group 2 of devices **502** includes a set of devices that receive a television signal through satellite with a delay time of y. Group 3 of devices **504** includes a set of devices that receive a television signal over the air with a delay time of z. Then, based on the delay times of each group, steps need to be taken to ensure these delays do not affect the ability of users to play a game of skill which corresponds to a live event shown on television. As described above, a lockout signal is sent at the appropriate time depending on the delay, or a lockout signal is sent, but included with the lockout signal is information for the lockout not to be implemented until the delay is accounted for. This ensures that users with different delays based on their television signal reception path do not receive advantages or disadvantages. Furthermore, in addition to the delays being related to the type of signal reception path such as cable versus satellite, the delays could also be related to other aspects of the signal reception path such as the location of the receiving television or the type of equipment that one television company uses versus another.

Game Production

In the production process, game data is time synchronized precisely with a video stream, utilizing the game production tool.

When playing, the user selects answers (e.g., 1, 2, 3, or 4 or by pressing on the touchscreen) on his cellular phone to answer the question before a time stamped "lockout" signal contained in the game data is received/triggered, precluding further input. The competitor's score is incremented or decremented by software in the game data, depending on whether the competitor is right or wrong with their selection.

The video content and the separately produced overlying game data are then either combined for streaming or broadcast (e.g., into a single data file, maintained as two data files), or an alternate methodology is utilized to ensure that the content is broadcast simultaneously on a single TCP, UDP, 3G, multicast, broadcast or other transmission, utilizing current data compression capabilities. Any appropriate transmission methodology is utilized, including WiFi. The game data contains graphic information separate from the video of the game, such as the selection options, for example "run," "pass," for a game based on a football broadcast. Separate digital sound tracks, one from the television programming (including streamed video, for example, television programming streamed over the Internet to a computing device), and one related to the game programming are also able to be combined for a single transmission. In other words, data is able to be either A) downloaded in advance or B) streamed or C) broadcast. The different types of data: 1) video and audio, 2) graphic game play data, 3) audio enhancements, 4) other types of data, are able to be either combined with each other or sent separately. Therefore, users are able to play simultaneously wherein the video, audio and game play data are received by streaming, broadcasting or downloaded using a simultaneous start time. Users are also able to play on demand wherein the video, audio and game play data are received when requested by streaming, broadcasting or downloaded. Users are also able

to practice with on demand games where they are not competing against other players. Regardless of how these discreet pieces of information are delivered to the phone, software resident on the phone ensures that the game play data and audio are synchronized with the video archive.

Game Play

Under this methodology, a user on an ad hoc basis, or as a subscriber to a service or charging the required fee to their cellular telephone bill, indicates their desire to participate in a contest based upon the old television program. The contests have a specific start time, displayed on the cellular phone, such as, for example, "1980 Super Bowl game, 3:15 pm," or in an alternative embodiment, the menu on the cellular phone describes a game played at any time by the cellular phone owner by selecting it from a menu on the cellular phone. Upon selecting this game from the menu, the underlying video and data files are streamed or downloaded to the cellular phone, and the video of the underlying telecast sporting event, game show, or other entertainment program, is displayed on the cellular phone utilizing software permanently or temporarily resident on a cellular phone client designed to display full motion video. A record of what games have been played for an individual subscriber is maintained on the service's server to ensure a subscriber always receives a game they have not played before.

Game Display

The data files which manage the game play, received simultaneously, also utilize software resident on the client for managing the display on the phone's LCD. This game software is able to be a separate "gaming client" or an "all in one" application which addresses the video and game elements, for example for a game based on a streamed broadcast received by the game playing client. The game data graphics are also able to be presented to the player by overlaying the text and symbols over the video content (e.g., television information), or in the alternative, utilize a separate portion of the cellular phone's display for this information, at the option of the producers. An example of this latter approach is the crawling information displayed at the bottom of a television screen containing stock ticker information or the way closed captioning information is displayed on television screens. In the alternative, a picture in picture (PIP) approach is also able to be used to separately display game play information from the underlying video (e.g., streaming video, television footage). In another alternative, the game play information is simply superimposed on top of the video.

Under this invention, the subscriber would play along with the 5- to 15-minute television segment of the game until its conclusion, and would be informed at the end, based upon software resident in the phone, what their total points earned are. In some embodiments, the segments are longer or shorter. By transmitting this game performance information to a central server for compilation, the competition would receive information on how their score relates to the scores achieved by other players of the game. Under an "on demand" game play format, users are able to selectively play against friends, and prizes would generally not be awarded, since the person could play the game as many times as they desire, or obtain the answers from someone who had played.

Games Based on Simultaneous Broadcast Other than a Live Event

In an alternative embodiment, the combined video and game data files produced by the same methodology described above is able to be simultaneously broadcast to all participants at a specific time, such as every 15-minutes, to all of the players who have registered their intention to play a specific game. In this format, these files would be individually streamed, or in the alternative, digitally broadcast, precisely at the same time to all participants. Another approach is to download the data through streaming, broadcast or other downloading technique in advance. Under this approach, the application ensures that the video and game play started at the appropriate time. This is able to be done by signaling a "start" signal to all players.

While game play unfolds in a manner similar to that described in U.S. Pat. No. 4,592,546, a significant difference in this invention and the prior art, is that, in some embodiments, all of the information utilized for the game is pre-produced and combined in a single data file, and received simultaneously by all participating cellular phones broadcast or streamed, to be separated and displayed for simultaneous viewing on a cellular phone by the methods described above. In some embodiments, while the games unfold to the participant in virtually the same manner as a game based upon a live telecast of a sporting event or game show, the cellular phone is not utilized as a receiving device for a second mass media communications synchronized with the underlying telecast, but rather is receiving the single data file or stream which contains both the video of the telecast and the game data information. The video and game data is then separated by application software resident on the cellular phone for simultaneous display on a single color LCD display.

Since all players receive the same game data at the same time, cheating among players, possible with on demand games, is not possible, and prizes can be awarded.

Benefits

While there is a large potential demand for games of skill for prizes based upon the live telecast/streaming of sporting events and syndicated game shows, participation in these games is generally limited to prime time or near prime time viewing on week days, and sporting events on the weekends. The explosion in the popularity of cellular games of short duration indicates that the owners of cellular telephones often find 5-10 minutes during the day to participate in stimulating entertainment work breaks, while commuting to and from work, sometimes even when they are working, amongst other times. The methodologies described herein provide a new and unique form of entertainment. While based on popular television programming, the games are able to be enjoyed either on demand or several times an hour with scheduled start times, since they are generated from any content such as television content (live or archived). The games are ever changing and are based on programming with a proven huge fan audience. This invention provides the highest quality production value at a fraction of the cost of existing video, computer and cellular games. Other games require the skills of graphic artists and designers, and extensive programming to create full motion 3D graphics in attempt to make games like EA Sports® John Madden Football, or Sony's Jeopardy!® games as close to the actual telecast as possible. This invention repurposes the actual television content with the production values and excitement of the original broadcasts of these events at a fraction of the cost.

In some embodiments, the game data is able to be adjusted such that it is synchronized with a video stream. For example, in cooperation with an originator of a video stream (e.g., NFL), the game data is integrated with a streaming game application, which is a separate application from one for broadcast television. Furthering the example, two applications are available to provide similar but different competitions; a first application for use with a video stream and

a second application for use with a television broadcast. The applications are similar in that they present questions and/or selections based on a video, but since the streaming video and the television broadcast may have different latencies, the applications operate slightly differently. In some embodiments, a single application is able to determine how the video content is being received (e.g., streaming versus broadcast), and the application is able to handle the latency differences. In some embodiments, an application determines when a stream is received (e.g., using automatic content recognition, watermarks, fingerprints, or any other analysis), and the application estimates and adjusts for an approximate delay for people in different locations. For example, servers or client devices in different parts of the world determine an amount of delay as described herein, and based on that amount of delay either delay presentation of a question/selection or perform other gameplay effects to ensure none of the participants of the game have an unfair advantage over other competitors based on the delay. Furthering the example, if users in San Francisco receive a stream 3 seconds after users in New York, then the presentation of a question for the users in New York is delayed 3 seconds, so that they all receive the question at the same time.

To utilize the methods and systems described herein, for the most part, a participant in a game of skill playing on his/her mobile device does not have to perform any different actions when playing a standard game of skill without the methods and systems described herein. The user simply plays as usual except that with the methods and systems described herein, users with faster or slower connections do not receive any advantages or disadvantages. In embodiments which require user input, the user performs an action, such as recognizing an event to synchronize the game with a live or taped event. For game producers, the methods and systems described herein able to be implemented automatically or performed manually. Automation includes technology to automatically determine the start of an event such as automatically detecting the start of a football game. Manual implementation requires a person to watch an event and respond to that event such as watching a football game and noting when the first play occurs in order to synchronize the "lock out" signal appropriately.

In operation, the methods and systems described herein are able to synchronize separate games of skill which have different latencies based on television signal reception differences, random delays and/or other delays. For live events where all of the participants are watching the event on television and participating in a game of skill corresponding to that live event, delays related to the television signal reception differences have to be handled. Television signal reception differences occur because some televisions receive the live event signal via satellite, while others have cable and still others have something else. The signals do not arrive at the participants at the same time. Therefore, to ensure fair competition, participants are separated into groups or cohorts based on delivery system type, location and other parameters that affect the timing of the signal. Then, using a mechanism described above, the delay for each group is determined. Based on that determined delay, the game of skill is able to be configured with the appropriate timing for a lock out signal, so that each participant has the same amount of time to select an answer and also sees the same amount of the live event as others before the lock out Occurs.

For games of skill where there are both participants attending the event live and watching it on television which typically has a few seconds delay, the participants are separated into different competitive groups wherein the attending participants are in one group and the television viewing participants are in another group.

For games of skill using tape recorded events like game shows, the important aspect is ensuring the game of skill corresponds with the televised recorded event. For example, if the game of skill were off by a few seconds, participants could receive multiple choice answers to the wrong questions. Therefore, the methods and systems described herein ensure that the game of skill is synchronized with the taped televised event even when there are different latencies depending on how and where the television signal is being displayed.

Furthermore, although the methods of handling latency have been described above as handling a specific scenario such as delays in television signal reception, the methods are able to be used in conjunction with each other as well. For example, when participants are separated into attending and televised groups because some participants are actually attending an event while others watch it on television, for those watching it on television there will still be issues from location to location and based on the television signal reception, so the latency balancer which handles that aspect of latency is also able to be implemented.

To encourage viewer participation, games, contests and social interactions are able to be synchronized with programming such as television shows or commercials utilizing a second screen such as a cell phone, iPad® or laptop computer. The programming is able to be television programming, Internet programming (e.g. a video displayed on a webpage or mobile device) or any other programming. The gaming is able to be any game such as a game of skill or chance, for example, a scavenger hunt or a treasure hunt.

In some embodiments, the programming and the gaming, contests or social interactions are displayed on a single screen. For example, Google TV™, Apple TV® or another IPTV includes a broadband connection which is capable of connecting to a website which is a companion site to the programming. The display on the television is able to include a Picture-in-Picture (PIP), display space near or around the telecast's picture (e.g., an L-shaped space), graphic overlay, or a split screen. In another example, a two-screen experience includes a wi-fi connection, an open wireless technology (e.g., Bluetooth®) or any other connection from the television to a tablet device such as an iPad®. In some embodiments, a computing device contained within the television couples to a server via the Internet, where the server stores files, displays, graphics, gaming information and/or any other information to be synchronized with the programming, and the application is separately displayed on the same screen for user interaction with the game or contest utilizing a controller for the television.

In a scavenger hunt game, a contest might be based on a member collecting items in a scavenger hunt fashion which appear in TV programs or commercials. The first person or teams to collect all of the items or collecting the most points wins.

In a treasure hunt game, clues to items to collect are given which make sense only upon the viewing of a commercial or program. A viewer enters an item (e.g. from multiple choice options), and the first to accumulate all of the items wins. Hereinafter, all references to a viewer are understood to include a single viewer or a team or teams of viewers. The teams are able to be formed through social networks or on an ad hoc basis. Exemplary formations of teams are able to be found in U.S. Pat. No. 8,002,618 which is hereby

incorporated by reference in its entirety. For example, teams are able to be formed and then play any game or contest such as a scavenger hunt, treasure hunt or bingo. The players on each team are able to work jointly or separately to collect items and perform other game play actions.

For example, a treasure hunt game based on the entertainment content or TV commercials provides the first item to search for: "Old English Sheep Dog with red collar." The application in the game mode records an input such as a press of a screen or button by a viewer the instant they observe the dog appear on the TV screen in connection with a participating show or commercial. Executing the required input at this precise time would validate that indeed THE Old English Sheep Dog had been collected. In another version, a score of 1000 points would rapidly be decremented beginning when a treasure hunt object appeared in a TV show or commercial. A rapid input would get 990 points, and someone who had spent time to find their phone might get 450 points for a slower response. The points are decremented incrementally, exponentially or in any other manner.

The viewer receives a prize upon the accumulation of a designated level of points, or in a money contest such as a $1 Million national contest, the first viewer to achieve a designated point's level wins the grand prize.

In another example of a game, a bingo-like game is presented where, instead of letters and numbers being used for a player's board, each player's board includes specific objects, characters, events or other items contained in a commercial, television series, show, event or other programming. The items are each collected by pressing a button within a prescribed amount of time (e.g., 5 seconds) of appearance of the object on the television. The first person to fill the card wins. Filling the card is able to mean filling the card fully or any other bingo-related definition of filling such as achieving a vertical, horizontal or diagonal line. For example, a player's card includes 25 slots, arranged in a 5×5, grid with items such as a Ford F-150, a Ford F-250, a Ford Focus, a Ford Mustang, an engine, and twenty other items. When the player watches a Ford commercial, the player sees a Ford Focus. The player then presses a button within the allotted time, and that slot in his board is filled. Each player's board is monitored, and when it is determined that a player has achieved a filled board, the player is declared the winner. In some embodiments, the other players are notified, and the game ends, and in some embodiments, additional winners are able to be determined (e.g. second and third place).

The system implements precise synchronization of a second screen and programming. The synchronization is able to be implemented using any methodology, such as utilizing the teachings of latencies. Exemplary methodologies for synchronizing have been described herein and any other methodologies of synchronizing are possible.

FIG. **6** illustrates a flowchart of a method of implementing a game synchronized with programming according to some embodiments. In the step **600**, an application detects programming with which to be synchronized. In the step **602**, the application synchronizes with the programming to provide application data such as gaming data. In the step **604**, based on user responses, the game is executed. For example, a scavenger hunt game, treasure hunt or other game based on the observation of something contained in a television broadcast game is executed. In some embodiments, in the step **606**, scores are tallied, prizes are awarded and/or other results are obtained. In some embodiments, the order of the steps is modified. In some embodiments, fewer or more steps are implemented.

Detection and synchronization are able to be implemented in any manner. The efficacy of the games depend on each player having an opportunity to obtain the maximum number of points achievable by entering their input as soon as possible after the specified item appears on the TV screen. The following provides examples of detection and synchronization. Existing events in the telecast are used as synchronization points or start points for previously downloaded data files to a mobile client, as well as a watermark, fingerprint not detectable by the viewer. A synchronization point is a visible or audible event located within the telecast. A synchronization point for a live telecast is contained in audio or video within the telecast. Information is inserted in a Vertical Blanking Interval (VBI) or digital equivalent of a show and tracked online in real-time. Information is embedded in the telecast and tracked online in real-time. Determining a start time of the telecast includes using a recognizable signal recognizable by a mobile device. A start time of a commercial is delivered using a recognizable signal recognizable by a mobile device. A plurality of synchronization points are used by a client to continuously check to ensure pre-produced data files are synchronized with the telecast. Inserted audio or video is used to continuously check to ensure the pre-produced data files are precisely synchronized on the client with the telecast. Inserted audio or video is used by a client to continuously check to ensure the pre-produced data files are precisely synchronized on the client with the telecast. The inserted audio or video is used by a server to continuously check to ensure the pre-produced data files are precisely synchronized on the client with the telecast.

In some embodiments, synchronizing includes determining an amount of delay to precisely synchronize between the game stored on a mobile device and the receipt of the program presented on a television (or mobile device through streaming) and substantially equalizing presentation of the game of skill or chance with programming or a commercial contained in a telecast through adjustment for the amount of delay of the telecast (or streaming content). Substantially equalizing includes equalizing receipt of lock out events relative to a televised/streamed event triggering a lock out. Synchronizing includes substantially equalizing a participant delay to ensure the participants each receive the game of skill or chance at substantially the same time. Synchronizing includes determining participant latency based on specific participant latencies and synchronizing the game of skill or chance for each of the participants. Synchronizing includes determining the latencies in receiving a streamed broadcast of an event and synchronizing game data to all recipients of the one or more streamed broadcasts of the event. Synchronizing includes utilizing an audio or video recognition system on a client with online access to the telecast's game control server. Synchronizing includes using added audio or video events in the telecast as synchronization points. A plurality of synchronization points within audio or video are used by software on a client in connection with a server to continuously monitor the telecast/streaming content to ensure the game of skill or chance played on the client is precisely synchronized with the telecast/streaming content. An artifact is inserted into the telecast/streaming content recognizable by an audio receiver in a mobile device which is utilized to start and continually keep the game of skill or chance synchronized with the telecast/streaming content.

Participants include ad hoc or preexisting groups of friends competing in a separate competition in disparate physical locations. The synchronization points are the audio

or video data for the telecast/streaming content residing on a server online with a mobile device. The participants constitute ad hoc or existing groups of geographically dispersed friends participating in a separate game of chance or skill. The participants are ad hoc or previously organized groups of friends competing against each other in a separate contest. Equalizing the participants includes time stamping the amount of delay on game-related data. Establishing the amount of delay is through an automated system which samples an audio or video track of a satellite, cable or over the air broadcast television signal (or streaming content), linked to a game server, to provide information related to a precise arrival of an underlying television picture/streaming content.

FIG. **7** illustrates a system for implementing a game synchronized with programming according to some embodiments. The system includes several devices such as a viewing device **700**, a secondary device **702**, a server device **704** and a network **706**. For example, a user views programming on the viewing device **700** (e.g. a television) and participates in a scavenger hunt game on the secondary device **702** (e.g. a smart phone). The game on the secondary device **702** is synchronized with the programming of the viewing device **700**. In some embodiments, the synchronization takes place using a program on the secondary device **702**, and in some embodiments, the server device **704** is used for synchronization. The network **706** is able to be any network such as the Internet, a cellular network or a combination of networks. Fewer or additional devices are able to be included within the system.

To utilize the synchronized gaming and programming, a user initiates a game which automatically synchronizes with the programming. In some embodiments, the programming initiates the game. For example, a user is watching television and a trigger in the television signal automatically starts the game. The user plays the game as any game would be played. For example, if the user is playing a scavenger hunt game, the user searches/looks for items and indicates when the items are found. If the user is playing a treasure hunt game, the user uses clues to locate an item. Points and/or prizes are awarded based on the timing of the user input/selections (e.g. a faster response receives more points than a slower response).

In operation, the synchronized gaming and programming is able to synchronize programming with a game presented on a second device. In some embodiments, the synchronized gaming and programming is also able to synchronize participants, for example by equalizing the amount of delay or sending a lockout signal at the appropriate time based on the amount of delay.

Although a scavenger hunt and a treasure hunt have been described herein, any other game is able to be played in conjunction with programming.

FIG. **8** illustrates a system for implementing a game synchronized with programming according to some embodiments. Content from a content source **800** is received at a game production center such as at a server **802**. The content source **800** is able to be a venue (of a sporting event), a device at a venue or a broadcasting company device. The content is able to be received as streaming content or any other audio and/or video coming from the content source **800**. For example, the content is able to be received via a television broadcast or an audio feed from a cellular phone present at a venue. A delay in the reception of the content is able to be determined (e.g., measured) as described herein. The delay amount is used to synchronize game data with the content or adjust the game data (e.g., adjust the time the game data is sent or triggered) at the server **802**. In some embodiments, only the time-adjusted game data is sent from the server **802** to user devices **804** which display the game data (e.g., on web-connected televisions, laptops). In some embodiments, the user devices **804** only display the game data (without displaying the content), and in some embodiments, the same user devices display the content as well (e.g., smart television displays the game data and the content using overlays, picture-in-picture or another implementation). For example, the user devices **804** which only receive the game data display the game data, and content **806** (e.g., a football game telecast) is displayed on a television or another user device. Other devices are able to be implemented in the system as well. In other embodiments, the user is physically observing a live event, while also receiving the game data.

FIG. **9** illustrates a system for implementing a game synchronized with programming according to some embodiments. Content from a content source **900** is received at a game production center such as at a server **902**. The content source **900** is able to be a venue (of a sporting event), a device at a venue or a broadcasting company device. The content is able to be received as streaming content or any other audio and/or video coming from the content source **900**. For example, the content is able to be received via a television broadcast or an audio feed from a cellular phone present at a venue. A delay in the reception of the content is able to be determined (e.g., measured) as described herein. The delay amount is used to synchronize game data with the content and combine the game data with the content at the server **902**. In some embodiments, the synchronized, combined game data and content is sent from the server **902** to user devices **904** which display the game data with the content (e.g., on web-connected televisions, laptops). In some embodiments, the same user devices display the game data with the content (e.g., smart television displays the game data and the content using overlays, picture-in-picture or another implementation). Other devices are able to be implemented in the system as well.

The present invention has been described in terms of specific embodiments incorporating details to facilitate the understanding of principles of construction and operation of the invention. Such reference herein to specific embodiments and details thereof is not intended to limit the scope of the claims appended hereto. It will be readily apparent to one skilled in the art that other various modifications may be made in the embodiment chosen for illustration without departing from the spirit and scope of the invention as defined by the claims.

What is claimed is:

1. A method of playing a game, comprising:

a. streaming video data and game data;

b. operating a program to display the video data and the game data, wherein the video data and the game data are synchronized when displayed; and

c. preventing users from submitting a response to the game data based on the video data and a lockout signal.

2. The method of claim **1** further comprising receiving a game start signal and starting the game.

3. The method of claim **1** further comprising playing the game by selecting one or more choices related to the video data.

4. The method of claim **1** wherein the video data and the game data are displayed simultaneously.

5. The method of claim **1** wherein the video data and the game data are displayed simultaneously on the same device.

6. The method of claim 1 wherein the video data and the game data are displayed simultaneously on separate devices.

7. The method of claim 1 further comprising collecting scores and reporting performance to participants' devices.

8. The method of claim 1 further comprising prohibiting further game-related input with the lockout signal.

9. The method of claim 1 wherein the game data contains graphic information in addition to the video data.

10. The method of claim 9 wherein the graphic information is displayed on the same device using methods including crawling information, closed captioned information, a picture in picture or a graphical overlay.

11. The method of claim 1 wherein the video data or the game data is buffered in advance of a scheduled start.

12. The method of claim 1 further comprising transmitting the video data and the game data on a transmission selected from a TCP, UDP, 3G, multicast or broadcast transmission.

13. The method of claim 1 wherein the video data and the game data are synchronously displayed.

14. The method of claim 1 wherein the video data and the game data are synchronized based on a delay and further wherein the delay represents delay of the game data.

15. The method of claim 1 wherein the video data comprises one or more live events.

16. The method of claim 15 wherein the one or more live events are viewed in person by a person physically attending a location corresponding to the one or more live events, wherein the person initiates the lockout signal based on occurrences in the one or more live events.

17. The method of claim 15 wherein information related to the one or more live events is received from a physical location corresponding to the one or more live events.

18. The method of claim 15 wherein the lockout signal occurs immediately before competitors in the contest are able to see relevant live action unfold.

19. The method of claim 15 wherein the lockout signal occurs immediately before a scoring chance in the one or more live events.

20. The method of claim 15 wherein the lockout signal involves an in-progress play, not during a stoppage, and preventing submitting the response before a critical element of the in-progress play unfolds.

21. The method of claim 15 wherein the lockout signal applies for a limited amount of time.

22. The method of claim 15 wherein the lockout signal applies for an action lasting a limited amount of time.

23. The method of claim 15 wherein the lockout signal involves presenting new odds on an unresolved proposition.

24. A server for synchronizing a game or contest with streaming content comprising:

a. a memory for storing an application, the application configured for:

i. transmitting game data for the game or contest to one or more devices on which the game or contest is to be played wherein the game data is to be synchronized with the streaming content at the one or more devices; and

ii. transmitting a lockout signal to the one or more devices to prevent users from submitting a response to the game or contest based on the streaming content; and

b. a processing component coupled to the memory, the processing component configured for processing the application.

25. The server of claim 24 further comprising determining an amount of delay in the streaming content using a method of automatic content recognition.

26. The server of claim 24 wherein existing events in the streaming content are used as synchronization points for previously downloaded data files to a mobile client.

27. The server of claim 24 wherein a synchronization point is a visible or audible event located within the streaming content.

28. The server of claim 24 wherein a synchronization point for synchronizing the streaming content and game data is contained in audio or video within the streaming content.

29. The server of claim 24 wherein information is embedded in the streaming content and tracked online in real-time.

30. The server of claim 24 further comprising determining an amount of delay in the streaming content using a recognizable signal recognizable by a mobile device.

31. The server of claim 24 wherein a plurality of synchronization points are used by a client to continuously check to ensure game data is synchronized with the streaming content.

32. The server of claim 24 wherein inserted audio or video is used to continuously check to ensure game data is synchronized on a client with the streaming content.

33. The server of claim 24 wherein the game or contest comprises one or more live events.

34. The server of claim 33 wherein the one or more live events are viewed in person by a person physically attending a location corresponding to the one or more live events, wherein the person initiates the lockout signal based on occurrences in the one or more live events.

35. The server of claim 33 wherein information related to the one or more live events is received from a physical location corresponding to the one or more live events.

36. The server of claim 33 wherein the lockout signal occurs immediately before competitors in the contest are able to see relevant live action unfold.

37. The server of claim 33 wherein the lockout signal occurs immediately before a scoring chance in the one or more events.

38. The server of claim 33 wherein the lockout signal involves an in-progress play, not during a stoppage, and preventing submitting the response before a critical element of the in-progress play unfolds.

39. The server of claim 33 wherein the lockout signal applies for a limited amount of time.

40. The server of claim 33 wherein the lockout signal applies for an action lasting a limited amount of time.

41. The server of claim 33 wherein the lockout signal involves presenting new odds on an unresolved proposition.

* * * * *

Exhibit 10

ABOUT WINVIEW TECHNOLOGY, INC.

WinView Technology, Inc. (WVT) is actively seeking exclusive joint-venture partnership within the U.S. mobile and online sports betting industry, to apply WVT's proprietary solutions for competitive advantage. These partnerships are aimed at addressing the industry's most pressing challenges. Leveraging fully patented, cheat-proof streamed sports events, WVT offers micro betting solutions for the U.S. market. Through a partnership model, significant proprietary marketing and revenue generating benefits will be deployed to B2C gaming operators, enhancing the landscape of mobile micro betting in the U.S.

In 2023, the U.S. sports betting industry saw gross revenues surpassing $11 billion. The landscape presents several challenges: fierce competition among gaming operators for market share of sports bettors and rising acquisition costs for these bettors. The accelerated growth of streaming over broadcast makes micro betting difficult if not impossible. WinView Technology, Inc., offers an exclusive solution providing proprietary enhanced sports betting application features and functionality. This approach aims to offer significant competitive advantage, foster growth in the total market, increase market share, boost revenues per average user and accelerate gross revenues for gaming operator partners.

Under 4 Seconds

Low Cost, High Capacity

100 +

Issued Patents

11 B

2023 U.S. Sports Betting Market

All-In-One Streaming App

WinView Technology, Inc. (WVT) offers proprietary application platform features including ultra-low latency streaming. This patented, innovative approach provides a powerful path to expand the market for sports bettors. WVT also offers a micro betting odds-setting system designed to double the operator's hold. Leveraging WVT's long software development relationship with ExMachina Group based in the Netherlands (www.exmachinagroup.com) WVT taps into their ULL streaming expertise with Livery

Video. ExMachina is renowned for developing proven, massive, low-latency synchronized streaming mobile apps, making them the leading development company worldwide in this domain.

Main: (704) 559-9720

support@winviewtechnology.com

WinView Technology, Inc.

7804-C Fairview Road, Suite 207

Charlotte, NC 28226

8am - 5pm EST daily

Contact Us

Privacy Policy

Exhibit 11

Popular
- Live now
- Promos
- Super Bowl
- NBA
- NCAAB
- NHL
- KOD 3
- Soccer
- PGA TOUR
- YourWay
- FD Squares
- UFC
- Tennis
- MLB
- NCAAF
- Parlay Hub
- Popular Bets
- Women's
- Earn $$$
- Casino
- Racing
- Learn to Bet
- Free to Play

All Sports
- Aussie Rules
- Baseball
- Basketball
- Boxing
- Cricket
- Cycling
- Darts
- Football
- Golf
- Handball
- Hockey
- Lacrosse
- MMA
- Motorsport
- Rugby League

WM Phoenix Open | NBA | NCAAB | Soccer | NHL | Super Bowl LIX | Mavs-Celtics

SGP Popular Same Game Parlay™ Bets

Liverpool vs Tottenham
SGP STARTS IN 17 MINUTES

Take Liverpool to overcome the 1-0 aggregate score & advance to the Carabao Cup Final!

- **Mohamed Salah** — ANYTIME GOALSCORER
- **Yes** — BOTH TEAMS TO SCORE
- **Liverpool** — TO QUALIFY FOR THE NEXT ROUND
- **Son Heung-Min** — PLAYER TO HAVE 1 OR MORE SHOTS ON TARGET

1057 PEOPLE PLACED

Edit | +470 — $10 WAGER WINS $47.02

Enter Parlay Hub to view more

WM Phoenix Open

More Wagers

Win Only

Scottie Scheffler	+280
Justin Thomas	+500
Christiaan Bezuidenhout	+2200
Sungjae Im	+2200
Byeong Hun An	+2200
J.T. Poston	+2800

LIVE More wagers

Show more

- 1st Round Leader
- Will there be a hole-in-one - WM Phoenix Open
- Top 5
- Top 10

Betslip

+125

Betslip empty
Add selections to place bet

Motorsport
Rugby League
Rugby Union
Snooker
Soccer
Special Bets
Table Tennis
Tennis

Other Links
NFL Team Odds
NBA Team Odds
NCAAF Schedule
MLB Team Odds
NCAAF Team Odds
NCAAB Team Odds
Terms and Conditions
Responsible Gaming
House Rules
Support
Fantasy
In Person Sportsbook

WM Phoenix Open | NBA | NCAAB | Soccer | NHL | Super Bowl LIX | Mavs-Celtics

Top 10

More Wagers

NBA Odds

More NBA

NBA	SPREAD	MONEY	TOTAL
Dallas Mavericks	+11.5 -106	+480	O 231.5 -112
@ Boston Celtics	-11.5 -114	-650	U 231.5 -108
SGP 7:30PM ET			More wagers
Houston Rockets	+1 -110	-102	O 215 -108
@ Minnesota Timberwolves	-1 -110	-116	U 215 -112
SGP 8:10PM ET			More wagers
Orlando Magic	+6.5 -110	+215	O 219 -110
@ Denver Nuggets	-6.5 -110	-260	U 219 -110
SGP 9:10PM ET			More wagers
Golden State Warriors	+7.5 -112	+240	O 222 -112
@ Los Angeles Lakers	-7.5 -108	-295	U 222 -108
SGP 10:00PM ET			More wagers
Sacramento Kings	+1 -110	+100	O 230.5 -110
@ Portland Trail Blazers	-1 -110	-118	U 230.5 -110
SGP 10:10PM ET			More wagers
Indiana Pacers	+5 -114	+164	O 229 -115
@ Los Angeles Clippers	-5 -106	-196	U 229 -105
SGP 10:40PM ET			More wagers

To Score 15+ Points Parlay Builder

To Score 20+ Points Parlay Builder

To Score 25+ Points Parlay Builder

More NBA

Men's College Basketball Odds

All Games

NCAA Basketball Mens Games	SPREAD	MONEY	TOTAL
North Carolina A&T	+17.5 -105	+1200	O 151.5 -115
@ Charleston	-17.5 -115	-3500	U 151.5 -105

Betslip

Betslip empty
Add selections to place bet

WM Phoenix Open | NBA | NCAAB | Soccer | NHL | Super Bowl LIX | Mavs-Celtics

Charleston	-17.5 -115	-3500	U 151.5 -105
SGP 6:00PM ET			More wagers
Albany	+11.5 -102	+540	O 159.5 -110
@			
Bryant	-11.5 -120	-800	U 159.5 -110
SGP 6:00PM ET			More wagers
Temple	-1.5 +100	-110	O 151.5 -110
@			
South Florida	+1.5 -122	-110	U 151.5 -110
SGP 7:00PM ET			More wagers
Youngstown St	+4.5 -102	+172	O 136.5 -110
@			
Oakland	-4.5 -120	-210	U 136.5 -110
SGP 7:00PM ET			More wagers
Northeastern	+3.5 -105	+146	O 131.5 -110
@			
Hofstra	-3.5 -115	-176	U 131.5 -110
SGP 7:00PM ET			More wagers
Western Kentucky	+1.5 -110	+102	O 157.5 -105
@			
Kennesaw State	-1.5 -110	-122	U 157.5 -115
SGP 7:00PM ET			More wagers
Sam Houston State	-1.5 -105	-118	O 146.5 -115
@			
Florida International	+1.5 -115	-102	U 146.5 -105
SGP 7:00PM ET			More wagers
William & Mary	+2.5 -102	+126	O 147.5 -106
@			
Drexel	-2.5 -120	-152	U 147.5 -114
SGP 7:00PM ET			More wagers
Iona	+1.5 -110	+104	O 139.5 -115
@			
Mt. St. Mary's	-1.5 -110	-125	U 139.5 -105
SGP 7:00PM ET			More wagers
Eastern Kentucky	+6.5 -110	+215	O 148.5 -115
@			
Florida Gulf Coast	-6.5 -110	-265	U 148.5 -105
SGP 7:00PM ET			More wagers

All Games

Betslip

Betslip empty
Add selections to place bet

WM Phoenix Open | NBA | NCAAB | Soccer | NHL | Super Bowl LIX | Mavs-Celtics

EFL Cup Semi Final

More Wagers >

To Qualify for the Next Round

Wager covers booth legs and extra time/penalties if required

Liverpool	-300
Tottenham	+225

SGP 3:00PM ET — More wagers >

English Football League Cup

Wager is graded based on the result after 90 Minutes plus stoppage time

	HOME	TIE	AWAY
Liverpool VS Tottenham	-550	+550	+850

SGP 3:00PM ET — More wagers >

To Score (90 mins)

To Score or Assist (90 mins)

Correct Score After 90 Minutes

More Wagers >

NHL Odds

More NHL >

NHL	SPREAD	MONEY	TOTAL
Vegas Golden Knights	-1.5 +210	-118	O 5.5 -110
@ New Jersey Devils	+1.5 -265	-102	U 5.5 -110
SGP 7:08PM ET — More wagers >			
Washington Capitals	-1.5 +156	-164	O 5.5 -120
@ Philadelphia Flyers	+1.5 -194	+136	U 5.5 +100
SGP 7:09PM ET — More wagers >			
Ottawa Senators	+1.5 -194	+128	O 5.5 -118
@ Tampa Bay Lightning	-1.5 +156	-154	U 5.5 -104
SGP 7:09PM ET — More wagers >			
Utah Hockey Club	-1.5 +160	-160	O 5.5 -122
@ Columbus Blue Jackets	+1.5 -200	+132	U 5.5 +100
SGP 7:10PM ET — More wagers >			
Carolina Hurricanes	-1.5 +138	-194	O 5.5 -104

Betslip

+125

Betslip empty

Add selections to place bet

WM Phoenix Open | NBA | NCAAB | Soccer | NHL | Super Bowl LIX | Mavs-Celtics

Carolina Hurricanes	-1.5 +138	-194	O 5.5 -104
@			
Minnesota Wild	+1.5 -170	+160	U 5.5 -118
SGP 7:40PM ET			More wagers
Florida Panthers	-1.5 +148	-176	O 5.5 -128
@			
St. Louis Blues	+1.5 -184	+146	U 5.5 +104
SGP 8:10PM ET			More wagers
Colorado Avalanche	-1.5 +152	-164	O 5.5 -130
@			
Calgary Flames	+1.5 -188	+136	U 5.5 +106
SGP STREAM 9:10PM ET			More wagers
Toronto Maple Leafs	-1.5 +142	-172	O 6.5 +106
@			
Seattle Kraken	+1.5 -176	+142	U 6.5 -130
SGP 10:10PM ET			More wagers
Vancouver Canucks	-1.5 +126	-205	O 5.5 -120
@			
San Jose Sharks	+1.5 -154	+168	U 5.5 -102
SGP STREAM 10:40PM ET			More wagers

More NHL

NHL Parlay Builder

- Anytime Goal Scorer
- Player to Record 2+ Shots On Goal
- Player to Record 3+ Shots On Goal

Super Bowl Odds

More Wagers

NFL	SPREAD	MONEY	TOTAL
Kansas City Chiefs	-1.5 -105	-120	O 48.5 -110
@			
Philadelphia Eagles	+1.5 -115	+102	U 48.5 -110
SGP SUN 6:35PM ET			More wagers

Any Time Touchdown Scorer

Tap a player name or icon for stats and more betting options.... Read more

Saquon Barkley	-190	Jalen Hurts	-115	Travis Kelce	+125
Kareem Hunt	+145	Xavier Worthy	+155	A.J. Brown	+180

SGP SUN 6:35PM ET More wagers

Betslip

+125

Betslip empty

Add selections to place bet

SUN 6:35PM ET More wagers

Show more

Game Specials - Popular

Each Team to Score 1+ Rushing TDs & 1+ Passing TDs in Each Half	+7500
Each Team to Score 1+ TD & 1+ FG in Each Half	+1400
Jalen Hurts & Patrick Mahomes to Each Record 15+ Passing Yards in Each Quarter	-105

SUN 6:35PM ET More wagers

Show more

- Coin Toss Result
- Touchdown Specials
- Passing Specials
- Rushing Specials
- Receiving Specials
- First TD Scorer
- To Score 2+ TDs
- Alternate Spread
- Alternate Total Points
- To Record a Sack
- First Scoring Play
- First Team to Reach the Red Zone
- Will There Be Overtime?

More Wagers

Super Bowl LIX MVP

More Super Bowl

Super Bowl LIX MVP

All bets have action, regardless of if the specified player's team takes part in the Super Bowl. For teams that make the... Read more

Patrick Mahomes	+120	Saquon Barkley	+250	Jalen Hurts	+370
Travis Kelce	+1400	Xavier Worthy	+3100	A.J. Brown	+3500

SUN 6:42PM ET

Show more

More Super Bowl

Super Bowl Specials

Betslip

Betslip empty

Add selections to place bet

Super Bowl Specials

FanDuel Super Bowl LIX Specials

Jalen Hurts, Saquon Barkley, & Patrick Mahomes to...	+7000	Any Offensive Lineman to Score a TD	+1800	Any Player to Score a 75+ Yard Receiving TD	+1700
Either QB to Throw for 5+ Passing TDs	+3300	Either Team to Record 7+ Sacks	+750	Patrick Mahomes & Jalen Hurts to Combine for 6+...	+320

SUN 6:40PM ET

Show more

Opening Kickoff to be a Touchback or Fair Catch

Color of First Gatorade Poured on Winning Head Coach

Will there be a Scorigami? (Unique Final Score in NFL History)

Any Player to Record an Octopus (Score TD & 2PT Conversion on Same Drive)

Patrick Mahomes Props

Patrick Mahomes - Alt Passing Yds

Patrick Mahomes 150+ Yards	-1800	Patrick Mahomes 175+ Yards	-800	Patrick Mahomes 200+ Yards	-400
Patrick Mahomes 225+ Yards	-225	Patrick Mahomes 250+ Yards	-118	Patrick Mahomes 275+ Yards	+152

SGP SUN 6:35PM ET More wagers

Show more

Patrick Mahomes Alt Passing TDs

Patrick Mahomes Alt Rushing Yards

Patrick Mahomes 1st Qtr Alt Passing Yards

Jalen Hurts Props

Jalen Hurts - Alt Passing Yds

Jalen Hurts 150+ Yards	-750	Jalen Hurts 175+ Yards	-320	Jalen Hurts 200+ Yards	-162
Jalen Hurts 225+ Yards	+122	Jalen Hurts 250+ Yards	+225	Jalen Hurts 275+ Yards	+410

SGP SUN 6:35PM ET More wagers

Show more

Jalen Hurts Alt Passing TDs

Jalen Hurts Alt Rushing Yards

Jalen Hurts 1st Qtr Alt Passing Yds

Saquon Barkley Props

Saquon Barkley - Alt Rushing Yds

Saquon Saquon Saquon

Betslip 0

+125

Betslip empty

Add selections to place bet

Saquon Barkley 50+ Yards	-1900	Saquon Barkley 60+ Yards	-1000	Saquon Barkley 70+ Yards	-600
Saquon Barkley 80+ Yards	-360	Saquon Barkley 90+ Yards	-240	Saquon Barkley 100+ Yards	-170

SGP SUN 6:35PM ET More wagers

Show more

Saquon Barkley Alt Receiving Yards

Saquon Barkley Alt Rushing + Receiving Yds

Saquon Barkley 1st Qtr Alt Rushing Yds

Travis Kelce Props

Travis Kelce - Alt Receiving Yds

Travis Kelce 25+ Yards	-1300	Travis Kelce 40+ Yards	-355	Travis Kelce 50+ Yards	-196
Travis Kelce 60+ Yards	-114	Travis Kelce 70+ Yards	+142	Travis Kelce 80+ Yards	+215

SGP SUN 6:35PM ET More wagers

Show more

Travis Kelce Alt Receptions

Travis Kelce 1st Qtr Alt Receiving Yards

Mavericks @ Celtics Odds

More Wagers

NBA	SPREAD	MONEY	TOTAL
Dallas Mavericks	+11.5 -106	+480	O 231.5 -112
Boston Celtics	-11.5 -114	-650	U 231.5 -108

SGP 7:30PM ET More wagers

First Basket

ⓘ The winner is deemed to be the player who scores the first point of the game (including free throws)

Kristaps Porzingis	+400	Jaylen Brown	+500	Kyrie Irving	+650

SGP 7:30PM ET More wagers

Show more

To Score 15+ Points

To Score 20+ Points

To Score 25+ Points

2+ Made Threes

3+ Made Threes

To Record 6+ Assists

Betslip

Betslip empty

Add selections to place bet

WM Phoenix Open | NBA | NCAAB | Soccer | NHL | Super Bowl LIX | Mavs-Celtics

To Record 6+ Assists

To Record 8+ Rebounds

To Record a Double Double

To Record a Triple Double

More Wagers

Kyrie Irving Props

Kyrie Irving - Points

Kyrie Irving - Assists

Kyrie Irving - Made 3s

Kyrie Irving - Rebounds

Jayson Tatum Props

Jayson Tatum - Points

Jayson Tatum - Assists

Jayson Tatum - Made 3s

Jayson Tatum - Rebounds

eBasketball Games

eBasketball H2H GG League 4x5 Mins		SPREAD	MONEY	TOTAL
Minnesota Timberwolves (ARCHER)	40			
@				
Denver Nuggets (RAZE)	41			
LIVE STREAM				More wagers
Milwaukee Bucks (CHIEF)	40	-5.5 -115	-430	O 123.5 -116
@				
Phoenix Suns (SPARKZ)	34	+5.5 -115	+270	U 123.5 -120
LIVE STREAM				More wagers
Denver Nuggets (DISCORD)	15	+4.5 -125	+166	O 113.5 -118
@				
Dallas Mavericks (RAIN)	19	-4.5 -110	-235	U 113.5 -118
LIVE STREAM				More wagers
Dallas Mavericks (AIRFORCE)		-1.5 -128	-158	O 109.5 -114
@				
Denver Nuggets (SABRE)		+1.5 -104	+118	U 109.5 -114
STREAM 2:43PM ET				More wagers

Live Tennis Odds More Tennis

Betslip

+125

Betslip empty

Add selections to place bet

Live Tennis Odds

More Tennis >

ATP Dallas 2025

Frances Tiafoe	1	0	0	+115
VS				
▶ Yoshihito Nishioka	1	0	40	-140

SGP LIVE STREAM 3RD SET — More wagers >

ATP Rotterdam 2025

Carlos Alcaraz	1	5	0	
VS				
▶ Andrea Vavassori	0	1	0	+5000

SGP LIVE STREAM 2ND SET — More wagers >

Rosario Challenger 2025

Federico Coria	0	3	30	+110
VS				
▶ Juan Manuel Cerundolo	1	1	0	-145

LIVE STREAM 2ND SET — More wagers >

▶ Andrea Collarini	0	4	15	-125
VS				
Francesco Passaro	0	3	15	-110

LIVE STREAM 1ST SET — More wagers >

ITF

Ryan Fishback	1	5	0	+115
VS				
▶ Kiranpal Pannu	0	6	30	-160

LIVE 2ND SET — More wagers >

M A Rodriguez Mojica / J Tavarez	1	2	30	-105
VS				
▶ M Jones / A Jones	0	4	15	-135

LIVE 2ND SET — More wagers >

Evan Zhu	0	4	0	+280
VS				
▶ Ernesto Escobedo	1	1	40	-460

LIVE 2ND SET — More wagers >

Elijah Strode	1	0	0	-800
VS				
▶ Patricio Alvarado	0	0	0	+420

LIVE 2ND SET — More wagers >

More Tennis

Questions about Kick of Destiny 3?

Click here for more info!

Legal Sports Betting Online with FanDuel Sportsbook

Welcome to FanDuel Sportsbook, where you can find the best sports betting odds for all of your favorite sports and events. **Whether you're looking to place a bet on NFL, NBA, NHL, MLB, college sports, or any other competition, use America and Canada's number one legal online sportsbook!** We offer the largest selection of betting options, including moneylines, point spreads, over/unders, prop bets, futures bets, parlays, and more. We also offer live betting, allowing you to place bets while a game in progress. Mobile betting is available for legalized online sports betting with the FanDuel Sportsbook and Casino betting app, available on Apple and Android. Check around for odds that interest you and good luck with your bets!

Why Is FanDuel the Best Online Sportsbook?

Safe and Secure Sports Betting: We are the #1 regulated online sports betting platform in the United States
Best Sportsbook Promos, Bonuses, and Odds Boosts: Get in on the sports betting action with our customer promotions, such as No Sweat First Bets and Odds Boosts on select sports events.
Faster Payouts: You will receive your winnings in as little as 24 hours
Mobile App and User Interface: FanDuel Sportsbook has an intuitive and user-friendly interface that makes it easy for users to navigate and place bets. Our mobile app is highly rated and available for both iOS and Android devices, making it convenient for sports bettors to place bets on-the-go.
Live Betting: FanDuel Sportsbook offers live in-play betting options, allowing users to place bets during games and events. Customers can also follow along in the app with real-time updates on scores, game statistics, and odds, ensuring that bettors have the most up-to-date information available to make informed decisions.
More Ways to Win: Bet our Same Game Parlays, moneylines, teasers, futures bets, partial game odds, prop bets, and more ways to legally place bets!

The Best Sports Betting Odds Among All Sportsbooks

Find today's odds, lines, and spreads for all sports at FanDuel Sportsbook. Click below to find up-to-the-minute sports betting odds to start betting on. Place bets on upcoming games, future results, or live bet a game currently progress.

NFL Odds
- Super Bowl Odds
- Super Bowl Props
- NFL Team Betting

College Football Odds
- National Championship Odds

College Basketball Odds
- March Madness Odds

NBA Odds
- NBA Finals Odds
- NBA Team Betting

MLB Odds
- World Series Odds

NHL Odds
- Stanley Cup Finals Odds

Golf Odds

PGA Odds

Soccer Odds

NASCAR and Racing Odds

UFC Odds

Tennis Odds

Boxing Odds

Cricket Odds

Darts Odds

Cycling Odds

Cycling Odds

Kentucky Derby Odds

What Type of Betting Odds are Available with FanDuel Sportsbook?

Online betting with FanDuel has something for all sports bettors. Whether you like spreads, moneylines, single bets, or 5 team parlays— if you can dream it, you can (probably) bet it on your favorite sports leagues. Check out a few sports wagering options below:

Spreads: Choose the favorite or underdog and bet on the margin of victory or defeat.
Moneylines: Pick winners outright and reap the rewards.
Teasers: Combine multiple bets and get more favorable spreads for each.
Totals: Choose the over under and bet on total number of points scored in a game.
Props: Bet on more than just winning and losing, including player performances, individual quarters, and more.
Live Bets: Kickoff is just the beginning - place bets throughout the game.

Can I Bet on Sports Online?

Yes! **FanDuel Sportsbook is the best rated among all online betting sites in the United States.** As long as you are physically located in an eligible state you are free to use the FanDuel Sportsbook for regulated sports betting online!

If you prefer mobile sports betting with our Apple or Android mobile app, be sure to select the state where you are currently physically located from the listed options when you first open the app to use the FanDuel Sportsbook.

States With Legal Online Sports Betting

FanDuel Sportsbook is currently available in states that have chosen to legalize sports betting: Pennsylvania, New Jersey, Iowa, Indiana, West Virginia, Colorado, Illinois, Tennessee , Michigan, Virginia, Arizona, Connecticut, Louisiana, New York, Kansas, Maryland, Ohio, Massachusetts, Kentucky, Vermont, North Carolina, Wyoming, and Puerto Rico. With sports betting legal, sports bettors can use their mobile device or our online sportsbook to place wagers. In certain states, FanDuel also offers retail sports betting at casino sportsbooks. FanDuel Sportsbook is also available in the Ontario province of Canada. You can find FanDuel Canada odds here.

How Do I Withdraw My Sportsbook Winnings?

You can withdraw your winnings anytime through PayPal, Prepaid Card, Check, Venmo (only in the US), and Online Banking. Please note, some states may limit which withdrawal options are available within their borders. You can view all of the available options in your state by going to the "Withdraw" page.

PayPal or Venmo withdrawals can take up to 48 hours to be approved. Once approved, you should see those funds within the hour. Prepaid Card withdrawals can take up to 48 hours to be approved. Once approved, you will be able to access the funds immediately. Online Banking withdrawals take 3-5 business days to process. If you withdraw via check, it may take up to 14 business days after it has been approved for checks to be processed and mailed out to the address on file.

FanDuel Sportsbook promotions are constantly updating and we find new and fun ways for you to bet on sports. Sportsbook bonuses and promotions will vary by state and different sporting events, and the only place to find the most up-to-date FanDuel Sportsbook promotions is on our site or mobile app. Additionally, you can find FanDuel promo codes for all FanDuel products.

 2/6/2025, 2:42:48 PM

If you or someone you know has a gambling problem and wants help, call **1-800-Gambler**

This site has been authorized by the State of New Jersey, Division of Gaming Enforcement for use by registered users physically present in New Jersey.

Persons under 21 are not permitted to engage in sports wagering.

For customer support please contact us **here**.

Betslip

Betslip empty
Add selections to place bet

Exhibit 12

Colorado Limited Gaming Control Commission

Minutes of Public Session
January 18, 2024

PUBLIC SESSION

I. Call to Order

Vice-Chair Landaveri called the January 18, 2024, meeting of the Colorado Limited Gaming Control Commission to order at 9:22 a.m. MST in person at the 1707 Cole Blvd., Suite 300 Lakewood, CO 80401, Division of Gaming Office and virtually via Cisco Webex. Commissioner Tipton was present via Cisco Webex and Commissioner Coleman was present in person, and a quorum existed. Commissioner Armstrong was excused for good cause.

Officials & Administrators in Attendance
Patsy Landaveri, Vice-Chair
Shawn Coleman, Commissioner
John Tipton, Commissioner via Cisco Webex
Michael Phibbs, Senior Director, Specialized Business Group
Christopher Schroder, Director
Kenya Collins, Director of Administration via Cisco Webex
Bradford Jones, Senior Assistant Attorney General
Torrey Samson, Assistant Attorney General
Paul Hogan, Chief Auditor
J. Wolff, Agent in Charge, Central City/Black Hawk
Brett Buckingham, Agent in Charge, Sports Betting
John Madruga, Agent in Charge, Background Unit
Jon Sullivan, Supervisory Investigator, Background Unit
Allen Hiserodt, Supervisory Investigator, Sports Betting
Shannon Gray, Public Information Officer, Specialized Business Group
Breanne Nolan, Executive Assistant, Secretary to CLGCC

II. Swearing in of Investigators

Christopher Schroder, Director, Division of Gaming, appointed John Charest, Vincent D'Angelo, Mathew Tanis, Chris Kreiger, Patrick Maul, Robert Thornberg, and Matthew Williams as Investigators for the Colorado Division of Gaming, effective on their respective dates of hire.

EXECUTIVE SESSION

The Commission voted unanimously to go into the Executive Session pursuant to sections 24-6-402(3)(a) (III), 44-30-521(1)(a), 44-30-526(1)(d), and 44-30-1507 of the Colorado Revised Statutes to review confidential background licensing reports that were scheduled for consideration in the Public Session.

The Executive Session was called to order at 9:30 a.m. MST.

PUBLIC SESSION

The Public Session was called back to order by Vice-Chair Landaveri at 9:57 a.m. MST.

III. Approval of Licensing Actions

The Commission voted unanimously to approve the Renewal of the Retail and Master Licenses for Minter Holdings LLC d/b/a Johnny Nolon's Casino; G.F. Gaming Corporation d/b/a The Famous Bonanza Casino; and G.F. Gaming Corporation d/b/a Easy Street Casino. These Retail and Master licenses will expire two years from their current dates of expiration.

The issuance of the above Master licenses does not concurrently grant approval to entities or individuals with whom these licensees have entered into, or considered entering into contracts for sports betting operations or internet sports betting operations; nor does it preclude any entities or individuals from being called forward by the Division to conduct a comprehensive background investigation regarding their suitability to operate in Colorado.

The Commission voted unanimously to approve the First Vendor Major License for SIG Sports Analytics Holdings, Inc.; and STRIVE PLATFORM LTD. d/b/a Strive Gaming. These Vendor Major Licenses will expire two years from their dates of issuance.

The Commission voted unanimously to approve the First Vendor Minor Licenses for BRAZE, INC.; ENJOY BASKETBALL INC.; Horizon Media LLC; Jumio Services Corporation; oddshustle LLC d/b/a betlogical; Push Cash Inc.; Skybox Performance Marketing LLC d/b/a Leads IQ; and Sprinklr, Inc. These Vendor Minor Licenses will expire two years from their dates of issuance.

The Commission voted unanimously to approve the Renewal of the Vendor Minor Licenses for Betting on Content, LLC d/b/a BOC Agency; Metric Gaming Services Limited; and THING OR TWO LTD. These Vendor Minor Licenses will expire two years from their current dates of expiration.

IV. Opportunity for the Public to Address the Commission

The Chair gave the public an opportunity to address the Commission on any item not appearing in the agenda.

Peggy Brown, President, Problem Gambling Coalition of Colorado, thanked the Division for its efforts in implementing HB22-1402 and the Responsible Gaming Grant Program. She also commented that the Division of Gaming had taken ownership of the self-exclusion list. She also commended Director Christopher Schroder's work in responsible gaming and mentioned that PGCC had been introduced to the Division's new Responsible Gaming Manager, Corrie Martinez.

V. Consideration of the order to Show Cause for Hedge, Inc.

Torrey Samson, Assistant Attorney General, presented the Order to Show Cause for Hedge, Inc. Discussion was had between the Commission, Torrey Samson, and AIC Brett Buckingham regarding the licensure status of Hedge, Inc.

The Commission voted unanimously to approve and authorize the Vice-Chair to sign and issue the: Order to Show Cause for Case No. DOG23004277 in the matter of Hedge, Inc. Vendor Minor License 94971638.

VI. Consideration of Limited Gaming Financial Statements for November 2023

The Commission voted unanimously to approve the Statement of Gaming Revenues, Gaming Taxes, and Expenditures (unaudited) for the five months ending on November 30, 2023, and to authorize its distribution.

VII. Consideration of Division Sports Betting Financial Statement for November 2023

The Commission voted unanimously to approve the Statement of Sports Betting Revenues, Taxes, and Expenditures (unaudited) for the five months ending on November 30, 2023, and to authorize its distribution.

VIII. Consideration of Limited Gaming Rules 10 & 29

The Commission voted unanimously to open the rulemaking hearing on Colorado Limited Gaming Rules 10 & 29.

Corrie Martinez, Responsible Gaming Manager, was sworn in and gave the presentation on Limited Gaming Rule 29 during which she presented additional amendments proposed by Division of Gaming staff based on stakeholder comments.

Discussion was had by the Commission, Corrie Martinez, and Director Christopher Schroder regarding advertisement definitions.

Michael Payne, Table Games Manager, was sworn in and gave the presentation of Limited Gaming Rule 10.

Discussion was had between the Commission and Michael Payne.

The Chair extended an opportunity for the public to testify on behalf of Limited Gaming Rules 10 & 29.

Peggy Brown, President, Problem Gambling Coalition of Colorado, stated that the PGCC supported all proposed amendments to Limited Gaming Rule 29.

The Commission voted unanimously to close the public comment portion of the rulemaking hearing for Limited Gaming Rules 10 & 29.

During deliberations, Commissioner Coleman proposed an additional amendment to Rule 29. The Commission voted unanimously to approve the amendments to Colorado Limited Gaming Rules 10 & 29, as modified.

The Commission voted unanimously to close the rulemaking hearing on Limited Gaming Rules 10 & 29.

IX. Consideration of Sports Betting Rule 9

The Commission voted unanimously to open the rulemaking hearing on Colorado Sports Betting Rule 9.

Corrie Martinez, Responsible Gaming Manager, was sworn in and gave the presentation for Sports Betting Rule 9 during which she presented additional amendments proposed by Division of Gaming staff based on stakeholder comments.

Discussion was had between the Commission and Corrie Martinez.

The Chair extended an opportunity for the public to testify on behalf of Sports Betting Rule 9. No members of the public came forward to testify.

The Commission voted unanimously to close the public comment portion of the rulemaking hearing for Sports Betting Rule 9.

Following deliberations, the Commission voted unanimously to approve the amendments to Colorado Sports Betting Rule 9.

The Commission voted unanimously to close the rulemaking hearing on Sports Betting Rule 9.

X. Presentations by 2023 Responsible Gaming Grant Recipients

The Vice-Chair introduced the 2023 Responsible Gaming Grant Recipients and explained that each presenter could give an 8-minute presentation, per project.

Daniel Umfleet, Jackie Stanmyre, Trent Lambert, Dr. Nathan Smith, and David Yeager were introduced as presenters for Kindbridge Research Institute (KRI).

Daniel Umfleet, Jackie Stanmyre, and David Yeager gave the presentation for KRI's first project: "Strategic Approaches to Gambling Expansion – A Review of Gambling Treatment Quality and Availability in Colorado."

Daniel Umfleet, Dr. Nathan Smith, and Trent Lambert gave the presentation for KRI's second project: "Colorado Military Problem Gambling Research, Education, and Recovery Program." Discussion was had between the Commission, Mr. Umfleet, Dr. Smith, and Mr. Lambert.

Daniel Umfleet gave the presentation for KRI's third project: "Athlete Well-being Program."

Corrie Martinez, Responsible Gaming Manager, presented the project for the Colorado Division of Gaming: "Play Legal, Play Responsible, Play Safe Marketing Campaign."

Peggy Brown and Deitra Sandy presented the first project from the Problem Gambling Coalition of Colorado (PGCC): "Problem Gambling Center."

Jamie Glick presented the second project for PGCC: "Collegiate Gambling Education and Prevention Program."

Brittany Beath and Patricia Lepiani presented the third project for PGCC: "Problem Gambling Awareness & Education Project." Discussion was had between the Commission and Ms. Lepiani.

Marlene Warner, Chelsea Turner, and Phil Sherwood presented the project for the Massachusetts Council on Gaming and Health titled: "Building Capacity in Colorado for a System of Responsible and Problem Gambling-Informed Stakeholders."

XI. Consideration of Organizational Matters

The Commission approved the minutes from the December 21, 2023 Public Session of the Colorado Limited Gaming Control Commission, as presented.

Michael Phibbs, Senior Director, Specialized Business Group, stated that the Department was still searching for a fifth Gaming Commissioner. He stated that this individual had to be a Certified Public Accountant and that they must reside in a judicial district on the western slope.

Christopher Schroder, Director, Division of Gaming, stated that the stakeholder workshop for exchange wagering would be held on February 12, 2024, at 9:15 a.m. MST. He also commented that since taking over the self-exclusion list, the Division had approximately 100 people sign up for self-exclusion, bring the grand total of excluded individuals to approximately 600.

XII. Opportunity for Industry Members to Address the Commission

The Chair gave an opportunity to anyone from the gaming industry to address the Commission regarding any current issues or events. No members of the industry came forward.

XIII. Adjournment

The Commission voted unanimously to adjourn the January 18, 2024, meeting of the Colorado Limited Gaming Control Commission at 12:06 p.m. MST.

Breanne Nolan, Secretary to the Colorado Limited Gaming Control Commission

Colorado Limited Gaming Control Commission

Minutes of Public Session
February 15, 2024

PUBLIC SESSION

I. Call to Order

Chair Armstrong called the February 15, 2024, meeting of the Colorado Limited Gaming Control Commission to order at 9:17 a.m. MST in person at the 1707 Cole Blvd., Suite 300 Lakewood, CO 80401, Division of Gaming Office and virtually via Cisco Webex. Commissioners Tipton and Coleman were present in person, and a quorum existed. Commissioner Landaveri was excused for good cause.

Officials & Administrators in Attendance
Kevin Armstrong, Chair
Shawn Coleman, Commissioner
John Tipton, Commissioner
Michael Phibbs, Senior Director, Specialized Business Group
Christopher Schroder, Director
Kirsten Gregg, Chief of Investigations
Kenya Collins, Director of Administration via Cisco Webex
Bradford Jones, Senior Assistant Attorney General
Torrey Samson, Assistant Attorney General
Paul Hogan, Chief Auditor
J. Wolff, Agent in Charge, Central City/Black Hawk
Brett Buckingham, Agent in Charge, Sports Betting
John Madruga, Agent in Charge, Background Unit
Michael Payne, Table Games Chair via Cisco Webex
Corrie Martinez, Responsible Gaming Manager
Shannon Gray, Public Information Officer, Specialized Business Group
Breanne Nolan, Executive Assistant, Secretary to CLGCC

EXECUTIVE SESSION

The Commission voted unanimously to go into the Executive Session pursuant to sections 24-6-402(3)(a)(III), 44-30-521(1)(a), 44-30-526(1)(d), and 44-30-1507 of the Colorado Revised Statutes to review confidential background licensing reports that were scheduled for consideration in the Public Session.

The Executive Session was called to order at 9:20 a.m. MST.

PUBLIC SESSION

The Public Session was called back to order by Chair Armstrong at 10:06 a.m. MST.

II. Approval of Licensing Actions

Senior Assistant Attorney General Bradford Jones announced that there were amendments to the licensing action section of the agenda. He stated that the amendments included adding "temporary" to the Reissuance of the *Temporary* Sports Betting License for Crown CO Gaming LLC d/b/a DraftKings, the Reissuance of the *Temporary* Internet Sports Betting Licenses for Crown CO Gaming LLC d/b/a DraftKings and BETFAIR INTERACTIVE US LLC d/b/a FANDUEL SPORTSBOOK, as well as the Reissuance of the *Temporary* Vendor Major Licenses for SBTech Malta Limited, SPortradar Solutions LLC, Sports Information Services Limited d/b/a Kambi, and Stadium Technology Group, LLC.

The Commission voted unanimously to approve the First Retail and Master Licenses for 118 Main Street Gaming, LLC d/b/a Empire Club Casino. These Retail and Master licenses will expire two years from their current dates of expiration.

The issuance of the above Master license does not concurrently grant approval to entities or individuals with whom this licensee has entered into or considered entering into contracts for sports betting operations or internet sports betting operations; nor does it preclude any entities or individuals from being called forward by the Division to conduct a comprehensive background investigation regarding their suitability to operate in Colorado.

The Commission voted unanimously to approve the Renewal of the Retail and Master Licenses for FHR-Colorado LLC d/b/a Bronco Billy's Casino; FHR-Colorado LLC d/b/a Billy's Casino; and FHR-Colorado LLC d/b/a Chamonix Casino & Hotel. These Retail and Master licenses will expire two years from their current dates of expiration.

The issuance of the above Master licenses does not concurrently grant approval to entities or individuals with whom these licensees have entered into or considered entering into contracts for sports betting operations or internet sports betting operations; nor does it preclude any entities or individuals from being called forward by the Division to conduct a comprehensive background investigation regarding their suitability to operate in Colorado.

The Commission voted unanimously to approve the Renewal of the Manufacturer/Distributor License for FHR – Colorado LLC d/b/a Bronco Billy's Casino. This Manufacturer/Distributor License will expire two years from its current date of expiration.

The Commission voted unanimously to approve the Renewal of the Operator License for Full House Resorts, Inc. This Operator License will expire two years from its current date of expiration.

The Commission voted unanimously to approve the Renewal of the Sports Betting Operator License for Internet Sports International, Ltd d/b/a ISI, Ltd. This Sports Betting Operator License will expire two years from its current date of expiration.

The Commission voted unanimously to approve the Reissuance of the Temporary Sports Betting Operator License for Crown CO Gaming LLC d/b/a DraftKings. This Temporary Sports Betting

Operator License was reissued pending the final result of the Division's background investigation.

The Commission voted unanimously to approve the Reissuance of the Temporary Internet Sports Betting Operator License for Crown CO Gaming LLC d/b/a DraftKings and BETFAIR INTERACTIVE US LLC d/b/a FANDUEL SPORTSBOOK. These Temporary Internet Sports Betting Operator Licenses were reissued pending the final results of the Division's background investigations.

The Commission voted unanimously to approve the First Vendor Major Licenses IMG ARENA US, LLC and SPORTCAST PTY LTD. These Vendor Major Licenses will expire two years from their dates of issuance.

The Commission voted unanimously to approve the Change of Ownership and Renewal of the Vendor Major License for NYX Digital Gaming (USA), LLC. This Vendor Major License will expire two years from its current date of expiration.

The Commission voted unanimously to approve the Reissuance of the Temporary Vendor Major Licenses for SBTech Malta Limited; Sportradar Solutions LLC; Sports Information Services Limited d/b/a Kambi; and Stadium Technology Group, LLC. These Temporary Vendor Major Licenses were reissued pending the final results of the Division's background investigations.

The Commission voted unanimously to approve the First Vendor Minor Licenses for Draft Brackets LLC d/b/a Draft Brackets; INOVA SOLUTIONS, INC.; OpTic Group, Inc.; OpticOdds Inc; The Arena Media Brands, LLC; and United Tote Gaming Services, LLC. These Vendor Minor Licenses will expire two years from their dates of issuance.

The Commission voted unanimously to approve the Renewal of the Vendor Minor Licenses for CheckdGroup Limited; CHIRP GOLF LLC d/b/a Chirp Golf; Darkside Management Ltd.; FLATIRON COLLECTIVE INC.; FTN Network, LLC d/b/a FTN Fantasy; Ingo Money, Inc.; OBeP Payments LLC d/b/a Trustly, Inc.; Pavilion Payments Gaming Services Inc. d/b/a Pavilion Payments; Prove Identity, Inc.; Slam Media Inc; Soundside Games LLC; YourPay LLC; and Morpheus Data Systems, Inc d/b/a BettorOff. These Vendor Minor Licenses will expire two years from their current dates of expiration.

III. Opportunity for the Public to Address the Commission

The Chair gave the public an opportunity to address the Commission on any item not appearing in the agenda.

Peggy Brown, President, Problem Gambling Coalition of Colorado, extended an invitation to the Commission to attend the Colorado Problem Gambling Awareness Luncheon on Thursday, March 14 from 12:00-1:00 p.m. at the Denver Marriot West.

IV. Consideration of Notice of Denial in the Matter of the Application of Carlos Quevedo License #56711

Torrey Samson, Assistant Attorney General, presented the Denial in the matter of the application of Carlos Quevedo. Discussion was had by the Commission and Ms. Samson.

The Commission voted unanimously to approve and authorize the Chair to sign and issue the: Denial for Case No. DOG23002958 in the matter of the application of Carlos Quevedo LIC# 56711.

V. Consideration of Limited Gaming Financial Statements for December 2023

The Commission voted unanimously to approve the Statement of Gaming Revenues, Gaming Taxes, and Expenditures (unaudited) for the six months ending on December 31, 2023, and to authorize its distribution.

VI. Consideration of Division Sports Betting Financial Statement for December 2023

The Commission voted unanimously to approve the Statement of Sports Betting Revenues, Taxes, and Expenditures (unaudited) for the six months ending on December 31, 2023, and to authorize its distribution.

VII. Supplemental Budget Changes for Limited Gaming & Sports Betting – Funding Appropriation Changes

Kristi Piazza, Budget Manager, Specialized Business Group, presented the Funding Appropriation Changes for the Limited Gaming and Sports Betting budgets. Ms. Piazza and Senior Assistant Attorney General, Bradford Jones, discussed and confirmed that these changes were not a decision item and were presented to the Commission publicly for information purposes only.

VIII. Consideration of Supplemental Budget Changes for Limited Gaming & Sports Betting – Background Investigations

Kristi Piazza, Budget Manager, Specialized Business Group, presented the Limited Gaming Supplemental Budget Changes – Background Investigations.

The Commission voted unanimously to approve the Supplemental Limited Gaming Budget Change of a $700,000 increase in Operating Expenses for appropriation TCCCEBKGD, Background Investigations, for Fiscal Year 2024.

Kristi Piazza presented the Sports Betting Background Investigations Supplemental Budget Changes.

The Commission voted unanimously to approve the Supplemental Sports Betting Budget Change of a $50,000 increase in Operating Expenses for appropriation TCCCESBBK, Background Investigations, for Fiscal Year 2024.

IX. Consideration of Limited Gaming Rule 21

The Commission voted unanimously to open the rulemaking hearing on Colorado Limited Gaming Rule 21.

Michael Payne, Table Games Manager, was sworn in and gave the presentation for Rule 21.

Discussion was had between the Commission, Mr. Payne, and Senior Assistant Attorney General Jones.

The Chair extended an opportunity for the public to testify on behalf of Limited Gaming Rule 21.

Daniel White, General Manger, Gilpin Casino was sworn in and asked clarifying questions regarding context of Limited Gaming Rule 21.

Discussion was had between Mr. White and Mr. Payne.

Christopher Schroder was sworn in and provided clarifying information to Mr. White.

Senior Assistant Attorney General Jones suggested that if there were further questions requiring input from other operators, the rulemaking hearing should be tabled until the March meeting of the Colorado Limited Gaming Control Commission.

Discussion was had between the Commission and Mr. White regarding submission of further comments from additional operators and the Colorado Gaming Association to the Colorado Division of Gaming.

The Commission voted unanimously to close the public comment portion of the rulemaking hearing for Limited Gaming Rule 21.

The Commission voted unanimously to table the rulemaking hearing on Colorado Limited Gaming Rule 21 until the March 21, 2024, meeting and encouraged additional comments to be sent via email to the Colorado Division of Gaming.

The Commission voted unanimously to close the rulemaking hearing for Limited Gaming Rule 29.

X. Consideration of Responsible Gaming Grant Applications for FY24

Corrie Martinez, Responsible Gaming Manager, gave a presentation outlining the submitted responsible gaming grant applications, each applicant's requested funding amount, and the Division's recommendations on funding each grant application.

There was a total of twelve applications, from five organizations, submitted. The total amount requested was $4,449,447.86. The Division recommended funding for seven of the applications

with a total funding amount of $1,960,470.60, and recommended not funding the requested employee salaries in any of the applications.

There was discussion between the Commission, Ms. Martinez, Senior Assistant Attorney General Jones, and Senior Director Michael Phibbs. It was suggested that comments from individuals with each organization were heard prior to the Commission voting on funding approval.

The first application presented was the "Problem Gambling Awareness & Education Project" from the Problem Gambling Coalition of Colorado. Ms. Martinez stated that the total funding requested was $651,500 and the Division recommended funding of $599,500.

The Commission voted unanimously to approve the Grant Request for the Problem Gaming Coalition of Colorado – Problem Gambling and Awareness in-part for a total of $599,500 with a funding period of 12 months.

The Commission took a recess at 11:58 a.m. MST.

The Public Session of the Colorado Limited Gaming Control Commission was called back to order at 12:14 p.m. MST.

The second application discussed was the "Problem Gambling Center" submitted by the Problem Gambling Coalition of Colorado. Ms. Martinez stated that the total funding requested was $651,970.00 and the Division recommended funding of $149,540.60. Ms. Martinez explained that the recommended funding total excluded monies requested for salaries.

Discussion was had between Peggy Brown, President of the PGCC, Jamie Glick, Board Member of the PGCC, and the Commission. Ms. Martinez clarified that salary budget lines were excluded from recommended funding totals for all applicants.

The Commission voted unanimously to approve the Grant Request for the Problem Gaming Coalition of Colorado – Problem Gambling Center in-part for a total of $149,540.60 with a funding period of 12 months.

The third application presented was Kindbridge Research Institute's "Healthy Gaming Education Program." Ms. Martinez stated that the total funding requested was $146,250 and the Division recommended a funding total of $71,500. Kindbridge Research Institute's Dr. Nathan Smith, Executive Director, and Daniel Umfleet, Board Director, confirmed that the "Healthy Gaming and Education Program" could be completed with the funding amount proposed by the Division of Gaming.

Following discussion amongst the Commissioners, the Commission voted unanimously to approve the Grant Request for Kindbridge Research Institute (KRI) – Healthy Gaming Education Program in-part for a total of $71,500 with a funding period of 12 months.

The fourth application discussed was Kindbridge Research Institute's "Screening and Telehealth Enhancement for Gambling Disorder (STEGD) Initiative in Colorado." Ms. Martinez stated that

the total funding requested was $795,132 and the Division recommended a funding total of $500,060. There were no comments from KRI regarding this application.

Following discussion amongst the Commissioners, the Commission voted unanimously to approve the Grant Request for Kindbridge Research Institute – Screening and Telehealth Enhancement for Gambling Disorder Initiative in Colorado in-part for a total of $500,060 with a funding period of 12 months.

The fifth application presented was the "Colorado Military Problem Gambling Research, Education & Recovery Program Phase 2" submitted by Kindbridge Research Institute. Ms. Martinez stated that the total funding requested was $585,117 and the Division recommended a funding amount of $404,970. Daniel Umfleet and Dr. Nathan Smith, Kindbridge Research Institute, gave a presentation regarding project updates for phase 2 and consideration of feedback received by the Colorado Limited Gaming Control Commission. Discussion was had between the Commission, Dr. Smith, and Mr. Umfleet, regarding the request and whether the program would be limited to all enlisted military personnel and veterans. Dr. Smith and Mr. Umfleet confirmed that they had taken the Commission's past comments into account and would be broadening the scope of the project to all enlisted personnel and veterans.

The Commission voted unanimously to approve the Grant Request for Kindbridge Research Institute – Colorado Military Problem Gambling Research, Education & Recovery Program Phase 2 in-part for a total of $404,910 with a funding period of 12 months.

The sixth application presented was the "Colorado Athlete Wellbeing Program Phase 2" submitted by Kindbridge Research Institute. Ms. Martinez stated that the total funding requested was $259,857 and the Division recommended a funding amount of $171,710. No comments were made by KRI.

Following discussion amongst the Commissioners, the Commission voted unanimously to approve the Grant Request for Kindbridge Research Institute – Colorado Athlete Wellbeing Program Phase 2 in-part for a total of $171,710 with a funding period of 12 months.

The seventh application presented was "The Standford Gambling Addiction Therapy Study (SGATS) in Colorado" submitted by Kindbridge Research Institute. Ms. Martinez stated that the total funding requested was $67,275 and the Division recommended a funding amount of $63,250. No comments were made by KRI.

Following discussion amongst the Commissioners, the Commission voted unanimously to approve the Grant Request for Kindbridge Research Institute – The Stanford Gambling Addiction Therapy Study (SGATS) in Colorado for a total of $63,250 with a funding period of 12 months.

The eighth application presented was Kindbridge Research Institute's "Research Project: Young and Emerging Adults Attitudes Survey." Ms. Martinez stated that the total funding requested was $175,000 but that the Division did not recommend funding for this application due to the lack of evidence of an agreement with the Colorado Department of Education for the proposed programs to be allowed in Colorado schools. Daniel Umfleet commented that KRI could resubmit this application during the 2025 submission round of Colorado Responsible Gaming Grant Program.

Discussion was had by Teresa Fiore, Vice President of Partnerships, EPIC Global Solutions, and Director Christopher Schroder. Director Schroder explained that rejection letters would be sent to applicants outlining reasoning for funding denial. Discussion was had by the Commission and Director Schroder.

The Commission voted unanimously to deny funding for Grant Request for Kindbridge Research Institute – Research Project: Young and Emerging Adults Attitudes Survey based on the Division's grant review committee recommendation, lack of compatibility with the suite of submitted grant applications, and the funds available in the gaming grant budget.

The ninth application presented was "The Colorado Advertising Compliance Review" submitted by Kindbridge Research Institute (KRI). Ms. Martinez stated that the total funding requested was $288,990 but that the Division did not recommend funding for this application, as the Division of Gaming would be completing a similar project. No comments were made by representatives of KRI.

Following discussion amongst the Commissioners, the Commission voted unanimously to deny funding for the Grant Request for Kindbridge Research Institute – The Colorado Advertising Compliance Review based on the Division's grant review committee recommendation, lack of compatibility with the suite of submitted grant applications, and the funds available in the gaming grant budget.

The tenth application presented was "Connecting Research and Practice" submitted by the International Center for Responsible Gaming (ICRG). Ms. Martinez stated that the total funding requested was $198,800 but that the Division did not recommend funding as sponsorships for conferences were not within grant requirement scope of directly addressing the issue of problem gaming in Colorado. Arthur Paikowsky, President, ICRG, provided clarifying comments regarding the purpose and benefit of the proposed conference in Colorado. Discussion was had by Mr. Paikowsky and the Commission. Director Christopher Schroder repeated that rejection letters with full explanations for funding denial would be sent to applicants and encouraged ICRG to edit its application and apply for funding in 2025.

Following discussion amongst the Commissioners, the Commission voted unanimously to deny funding for the Grant Request for International Center for Responsible Gaming – Connecting Research and Practice based on the Division's grant review committee recommendation, lack of compatibility with the suite of submitted grant applications, and the funds available in the gaming grant budget.

The eleventh application considered was "Mobile Sports Wagering: The Effect of Data Accessibility and Visualization" submitted by iProtekt Research Foundation. Ms. Martinez stated that the total funding requested was $290,556.86 but that the Division did not recommend funding due to lack of eligibility under 501c3 and that per rule, applicants must be non-profit organizations. Discussion was had by the Commission.

Following discussion amongst the Commissioners, the Commission voted unanimously to deny funding for the Grant Request for iProtekt Research Foundation – Mobile Sports Wagering: The Effect of Data Accessibility and Visualization based on the Division's grant review committee

recommendation, lack of compatibility with the suite of submitted grant applications, and the funds available in the gaming grant budget.

The twelfth and final application presented was "Treatment, Recover, and Awareness: An Integrated Approach to Mitigating Gambling Harm in Colorado" submitted by the Massachusetts Council on Gaming and Health. Ms. Martinez stated that the total funding requested was $375,000 but that the Division did not recommend funding due to a previously funded project with similar goals in fiscal year 2023 as well as current efforts by the Colorado Division of Gaming to advertise responsible gaming, causing redundancy.

The Commission voted unanimously to deny funding for the Grant Request for The Massachusetts Council on Gaming and Health – Treatment, Recovery and Awareness: An Integrated Approach to Mitigating Gambling Harm in Colorado based on the Division's grant review committee recommendation, lack of compatibility with the suite of submitted grant applications, and the funds available in the gaming grant budget.

XI. Consideration of Organizational Matters

The Commission approved the minutes from the November 16, 2023, and January 18, 2024, Public Sessions of the Colorado Limited Gaming Control Commission, as presented.

Christopher Schroder, Director, Division of Gaming, stated that the Division had completed an assessment through a third party and that the Division would implement a best practices policy based on the results of the assessment. He explained that a stakeholder workshop regarding rules for exchange wagering was held on February 12, 2024, and the Division was in the process of collecting further comments on those rules. He also detailed that the total handle of 2024 Superbowl bets was $46,354,977, including online wagers of $45,316,809 and retail wagers of $1,038,369, which was a 22% increase from 2023. He stated that over $29,228,265 in bets were made as well as futures bets of $17,126,712.12, making a total win percentage of 14.3%.

XII. Opportunity for Industry Members to Address the Commission

The Chair gave an opportunity to anyone from the gaming industry to address the Commission regarding any current issues or events. No members of the industry came forward.

XIII. Adjournment

The Commission voted unanimously to adjourn the February 15, 2024, meeting of the Colorado Limited Gaming Control Commission at 1:09 p.m. MST.

Breanne Nolan, Secretary to the Colorado Limited Gaming Control Commission

Colorado Limited Gaming Control Commission

Minutes of Public Session
March 29, 2024

PUBLIC SESSION

I. Call to Order

Chair Armstrong called the March 29, 2024, meeting of the Colorado Limited Gaming Control Commission to order at 8:45 a.m. MDT via Cisco Webex. Commissioners Tipton and Coleman were present via Cisco Webex, and a quorum existed.

The Chair relinquished the floor to Chris Schroder, Director, Division of Gaming. Director Schroder thanked the Commission for their flexibility the schedule the March meeting and stated that Commissioner Landaveri had resigned from the Limited Gaming Control Commission. He explained that the Division was in search of a CPA member and business member for the Commission and if any parties were interested, they could reach out for an application.

Officials & Administrators in Attendance
Kevin Armstrong, Chair
Shawn Coleman, Commissioner
John Tipton, Commissioner
Michael Phibbs, Senior Director, Specialized Business Group
Christopher Schroder, Director
Kirsten Gregg, Chief of Investigations
Kenya Collins, Director of Administration via Cisco Webex
Bradford Jones, Senior Assistant Attorney General
Torrey Samson, Assistant Attorney General
Paul Hogan, Chief Auditor
J. Wolff, Agent in Charge, Central City/Black Hawk
John Madruga, Agent in Charge, Background Unit
Chris Krieger, Criminal Investigator, Sports Betting
Breanne Nolan, Executive Assistant, Secretary to CLGCC

EXECUTIVE SESSION

The Commission voted unanimously to go into the Executive Session pursuant to sections 24-6-402(3)(a)(III), 44-30-521(1)(a), 44-30-526(1)(d), and 44-30-1507 of the Colorado Revised Statutes to review confidential background licensing reports that were scheduled for consideration in the Public Session.

The Executive Session was called to order at 8:58 a.m. MDT.

PUBLIC SESSION

The Public Session was called back to order by Chair Armstrong at 9:20 a.m. MDT.

II. Approval of Licensing Actions

The Commission voted unanimously to approve the Renewal and Change of Ownership of the Manufacturer/Distributor License for Merit Cripple Creek LLC. This Manufacturer/Distributor License will expire two years from its current date of expiration.

The Commission voted unanimously to approve the Renewal of the Associated Equipment Supplier License for Genesis Gaming Solutions, Inc. This Associated Equipment Supplier License will expire two years from its current date of expiration.

The Commission voted unanimously to approve the First Vendor Major License for INTELLR, INC. This Vendor Major License will expire two years from its date of issuance.

The Commission voted unanimously to approve the Reissuance of the Temporary Internet Sports Betting Operator Licenses for American Wagering, Inc. d/b/a Caesars Sportsbook; Digital Gaming Corporation USA d/b/a Betway; Rush Street Interactive Colorado, LLC; Smarkets USA OP CO. d/b/a SBK; and BetMGM, LLC d/b/a Roar Digital. These Temporary Sports Betting Internet Operator Licenses were reissued pending the final result of the Division's background investigations.

The Commission voted unanimously to approve the Reissuance of the Temporary Sports Betting Operator Licenses for American Wagering Inc. d/b/a Caesars Sportsbook (Horseshoe) and American Wagering Inc. d/b/a Caesars Sportsbook (Lady Luck). These Temporary Sports Betting Operator Licenses were reissued pending the final results of the Division's background investigations.

The Commission voted unanimously to approve the First Temporary Sports Betting Operator Licenses for American Wagering Inc. d/b/a Caesars Sportsbook (Grand Z) and American Wagering Inc. d/b/a Caesars Sportsbook (Z Casino). These Temporary Sports Betting Operator Licenses were issued pending the final result of the Division's background investigation.

Bradford Jones, Senior Assistant Attorney General, suggested that due to multiple Commissioners' time constraints, the Vendor Minor licensing actions should be held over until the Commission's April 2024 meeting. He stated that existing Vendor Licenses would remain active per section 24-4-104(7), C.R.S., and continuance letters would be issued by the Division. Senior Assistant Attorney General Jones then suggested that the Commission address the financial statements and proposed Commission Policy 24-01, while all other remaining matters would be considered at the April 18, 2024 meeting or an emergency meeting.

IV. Consideration of Limited Gaming Financial Statements for January 2024

The Commission voted unanimously to approve the Statement of Gaming Revenues, Gaming Taxes, and Expenditures (unaudited) for the seven months ending on January 31, 2024, and to authorize its distribution.

V. Consideration of Division Sports Betting Financial Statement for January 2024

The Commission voted unanimously to approve the Statement of Sports Betting Revenues, Taxes, and Expenditures (unaudited) for the seven months ending on January 31, 2024, and to authorize its distribution.

VIII. Consideration of Proposed Commission Policy 24-01

Chris Schroder, Director, Division of Gaming, presented proposed Commission Policy 24-01 regarding the consideration of licensing matters through a consent agenda. Discussion was had by Director Schroder, Senior Assistant Attorney General Jones, and the Commission.

The Commission voted unanimously to approve Commission Policy 24-01, as presented.

XIII. Adjournment

Director Schroder stated that remaining matters on the March 29, 2024, meeting agenda would be addressed at the April 18, 2024 meeting of the Colorado Limited Gaming Control Commission.

The Commission voted unanimously to adjourn the March 29, 2024, meeting of the Colorado Limited Gaming Control Commission at 9:33 a.m. MDT.

Breanne Nolan, Secretary to the Colorado Limited Gaming Control Commission

Colorado Limited Gaming Control Commission

Minutes of Public Session
April 18, 2024

PUBLIC SESSION

I. Call to Order

Chair Armstrong called the April 18, 2024, meeting of the Colorado Limited Gaming Control Commission to order at 9:20 a.m. MDT in person at the 1707 Cole Blvd., Suite 300 Lakewood, CO 80401, Division of Gaming Office and virtually via Cisco Webex. Commissioners Tipton and Coleman were present in person, and a quorum existed.

Officials & Administrators in Attendance
Kevin Armstrong, Chair
Shawn Coleman, Commissioner
John Tipton, Commissioner
Christopher Schroder, Director
Kirsten Gregg, Chief of Investigations
Allen Hiserodt, Chief of Sports Betting
Kenya Collins, Director of Administration via Cisco Webex
Bradford Jones, Senior Assistant Attorney General
Torrey Samson, Assistant Attorney General
Paul Hogan, Chief Auditor
J. Wolff, Agent in Charge, Central City/Black Hawk
Bradley Nelson, Agent in Charge, Cripple Creek
John Madruga, Agent in Charge, Background Unit
Michael Payne, Table Games Chair
Andrew Leibbrand, Criminal Investigator, Limited Gaming
Spencer Loos, Criminal Investigator, Limited Gaming
Breanne Nolan, Executive Assistant, Secretary to CLGCC

II. Swearing in of Investigators

The Chair appointed Andrew Leibbrand and Spencer Loos, Investigators for the Colorado Division of Gaming effective on their respective dates of hire. Investigators Leibbrand and Loos repeated the Oath of Office that was administered by Chair Sherriff Armstrong.

EXECUTIVE SESSION

The Commission voted unanimously to go into the Executive Session pursuant to sections 24-6-402(3)(a) (III), 44-30-521(1)(a), 44-30-526(1)(d), and 44-30-1507 of the Colorado Revised Statutes to review confidential background licensing reports that were scheduled for consideration in the Public Session.

The Executive Session was called to order at 9:25 a.m. MDT.

PUBLIC SESSION

The Public Session was called back to order by Chair Armstrong at 9:48 a.m. MDT.

III. Approval of Licensing Actions

The Commission voted unanimously to approve the Reissuance of the Vendor Major License for Swish Analytics US Inc. This Vendor Major License will expire two years from its current date of expiration.

The Commission voted unanimously to approve the First Vendor Minor Licenses and the Renewals of the Vendor Minor Licenses listed in the Consent Agenda in the April 2024 public materials. These Vendor Minor Licenses listed in the Consent Agenda will expire two years from their dates of issuance and/or expiration.

IV. Opportunity for the Public to Address the Commission

The Chair gave anyone from the public an opportunity to address the Commission on any item not appearing in the agenda. No one from the public came forward for comment.

V. Consideration of Limited Gaming Financial Statements for February 2024

The Commission voted unanimously to approve the Statement of Gaming Revenues, Gaming Taxes, and Expenditures (unaudited) for the eight months ending on February 29, 2024, and to authorize its distribution.

VI. Consideration of Division Sports Betting Financial Statement for February 2024

The Commission voted unanimously to approve the Statement of Sports Betting Revenues, Taxes, and Expenditures (unaudited) for the eight months ending on February 29, 2024, and to authorize its distribution.

VII. Consideration of the and Settlement Agreement in the Matter of Hedge, Inc.

Torrey Samson, Assistant Attorney General, presented the Stipulation and Settlement Agreement for Hedge, Inc. Discussion was had by the Commission and Assistant Attorney General Samson regarding Hedge, Inc.'s barring from future licensure in Colorado, as an entity.

The Commission voted unanimously to approve and authorize the Chair to sign and issue the Stipulation and Settlement Agreement in Case No. DOG23004277 in the Matter of Hedge, Inc. Vendor Minor License No. 94971638.

VIII. Consideration of Involuntary Exclusion for Andrew Matthew Baca

Bradford Jones, Senior Assistant Attorney General, gave an overview of the action for petition of involuntary exclusion.

J. Wolff, Agent in Charge, Central City Investigations, presented the memo to support recommendation of Involuntary Exclusion for Andrew Matthew Baca. Discussion was had between the Commission, AIC Wolff, and Senior Assistant Attorney General Jones, regarding the charges and incident leading to Andrew Matthew Baca's recommendation for Involuntary Exclusion.

Prior to the call for a motion, Senior Assistant Attorney General Jones recommended that the Commission state which factors, violating section 44-30-1703 of the Colorado Revised Statutes, contributed to Involuntary Exclusion recommendation for Andrew Matthew Baca.

The Commission voted unanimously to approve the Division's petition to involuntarily and permanently exclude Andrew Matthew Baca from gaming in Colorado, based on actions that posed a threat to licensees and public of Colorado, existence of prior convictions in other jurisdictions, and reputation that threatens gaming in Colorado. The Commission directed the Commission's Attorneys General representatives to prepare an order to memorialize the decision which would be reviewed and signed by the Chair.

IX. Consideration of Involuntary Exclusion for Shaun Joseph Benward

Michael Payne, Table Games Chair, presented the memo to support recommendation of Involuntary Exclusion for Shaun Joseph Benward. Discussion was had by the Commission and Mr. Payne regarding the past charges and current case against Shaun Joseph Benward.

Discussion was also had by the Commission and Christopher Schroder, Director, Division of Gaming, regarding the trend in actions and charges against Shaun Joseph Benward in Colorado and multiple jurisdictions, dating back to 2014.

The Commission voted unanimously to approve the Division's petition to involuntarily and permanently exclude Shaun Joseph Benward on the following basis: the individual's presence poses a threat to gaming licensees or members of the public, the individual's reputation adversely effects the Colorado gaming industry, the individual's prior exclusions and ejections from establishments under rules and regulations in other jurisdictions, the individual is a career professional offender of gaming laws throughout the country, and the individual's prior actions from 2014 as well as 2023 with outstanding warrants. The Commission directed the Commission's Attorneys General representatives to prepare an order to memorialize the decision, which would be reviewed and signed by the Chair.

X. Comments from the Division of Gaming regarding the Responsible Gaming Grant Program – iProtekt

Christopher Schroder, Director, Colorado Division of Gaming, commented on an application from iProtekt that was submitted during the 2024 Responsible Gaming Grant Program. He stated after further examination, the Division determined iProtekt had obtained non-profit status and was an eligible organization for grant funding. He invited iProtekt to apply for a responsible gaming grant in the future.

XI. Consideration of Limited Gaming Rules 10, 12, 21 & 28

The Commission voted unanimously to open the rulemaking hearing on Colorado Limited Gaming Rules 10, 12, 21 & 28.
Michael Payne, Table Games Chair, was sworn in and gave the presentation for Gaming Rules 10, 12, 21 & 28.

Discussion was had between the Commission and Mr. Payne regarding identification of betting sensor lens color for different wager amounts, under Rule 12 30-1254(5)(A).

Christopher Schroder, Director, Division of Gaming, was sworn in for comment. He stated that as the rules were written, the Division has no input on color, rather requests there be delineation between sensor color for a wager that was made on the progressive.

Commissioner Tipton stated that, based on comments, the rule be amended to add "color to be determined by the casino."

The Chair extended an opportunity for the public to testify on behalf of Limited Gaming Rules 10, 12, 21 & 28. No members of the public came forward to testify.

The Commission voted unanimously to close the public comment portion of the rulemaking hearing for Limited Gaming Rules 10, 12, 21 & 28.

The Commission voted unanimously to approve the amendments to Colorado Limited Gaming Rules 10, 12, 21 & 28, as amended with added language, "as determined by the Casino" under Rule 12 30-1254(5)(A) as noted by the Commission and its counsel.

The Commission voted unanimously to close the rulemaking hearing on Colorado Limited Gaming Rules 10, 12, 21 & 28.

XII. Consideration of Colorado Sports Betting Rules 1 & 7 – Exchange Wagering

The Commission voted unanimously to open the rulemaking hearing on Colorado Sports Betting Rules 1 & 7.

Allen Hiserodt, Chief of Sports Betting, and Mia Tsuchimoto, Sports Betting Program Manager, were sworn in and gave the presentation for Sports Betting Rules 1 & 7. Christopher Schroder, Director, Division of Gaming was sworn in for comments.

Discussion was had by the Commission, Director Schroder, Chief Hiserodt, and Assistant Attorney General Torrey Samson, regarding the definition of and background checks for entities as described in Rule 7.6.

The Chair extended an opportunity for the public to testify on behalf of Sports Betting Rules 1 & 7.

Alex Kane, CEO, SportTrade Inc., commended the Division and Commission for bringing rules for exchange wagering forward in Colorado, as an operator that already offers this type of wagering in New Jersey. He also commented that per the Colorado rules, an Internet Sports Betting Operator was required to register market makers prices and may market its activity as exchange wagering or as "betting against friends", and he believed that this action could have responsible gaming implications.

The Commission voted unanimously to close the public comment portion of the rulemaking hearing for Sports Betting Rules 1 & 7.

The Commission deliberately prior to calling for a motion. Commissioner Tipton stated that he would like the Division to look at including entities in background investigations, in the future. Commissioner Tipton commented that it was time to move forward with approval of these regulations and that he found all comments from Stakeholders and the Division to be valid and constructive.

Senior Assistant Attorney Bradford Jones stated that he was not adding to deliberations, but there would be a stakeholder notification process for viable solution to entity wagering and significantly more information regarding this topic if it were to move forward.

The Commission voted unanimously to approve the amendments to Colorado Sports Betting Rules 1 & 7, as presented.

The Commission voted unanimously to close the rulemaking hearing on Colorado Sports Betting Rules 1 & 7.

XIII. Rulemaking Hearing on Colorado Gaming Rule 14, Gaming Tax

The Commission voted unanimously to open the rulemaking hearing on Colorado Gaming Rules 14, Gaming Tax.

Paul Hogan, Chief Auditor, was sworn in and gave a presentation overviewing the Gaming Tax Setting process.

Paul Hogan submitted into the record, the Statements of Gaming Impacts/Annual Reports for the Colorado Judicial Branch. He noted that these documents were included in the materials as part of the tax setting hearing.

Mark Superka, Vice Chancellor for Finance and Administration, Colorado Community College System, gave a presentation regarding the gaming impacts for the over 114,000 who attend schools within the Community College System.

Discussion was had between the Commission and Mr. Superka regarding the seven percent of out of state students and the programs they participated in. Mr. Superka stated that a majority of out of state students were enrolled in specialty programs at rural schools.

Penfield W. Tate III, Board Chair; Annie Levinsky, Chief of Staff; and Patrick Eidman, Chief Preservation Officer; all gave a presentation regarding the Statement of Gaming Impacts and Annual Report for History Colorado.

Mr. Penfield W. Tate III expressed appreciation for ongoing opportunities and support for funding History Colorado activities that benefitted the citizens of Colorado.

Ms. Annie Levinsky detailed multiple History Colorado projects that were funded in 2023, including the “Hands on History Program” for children through 8th grade and the “Buffalo Soldiers Exhibit” at Fort Garland. She stated that History Colorado served 500,000 people in person at its over 11 museums and historical sites and 2.5 million people digitally through these same exhibits.

Mr. Patrick Eidmann stated that as of FY23, History Colorado (HC) had funded 5,500 projects reaching all 64 counties in Colorado. He explained that HC had a commitment to reach urban and rural communities and that there were a total of 113 grants submitted for a total funding amount of $10.9 million. He also detailed current projects such as the Historical Grave Hotel in

Idaho Springs serving as affordable living for seniors; the Costilla County School restoration to serve as a community gathering space and internet hub; and the Alpine Tunnel in Palisade. He stated that over $360 million had been invested in state project and sixty percent of grants were awarded to rural communities for downtown restorations and other capital improvements.

Discussion was had between the Commission and Mr. Eidmann regarding affordable housing grants and how gaming communities could try to implement them.

The Chair extended an opportunity for members of the public to testify on behalf of Gaming Rule 14, Gaming Tax. No members of the public came forward to testify.

The Commission voted unanimously to close and continue the hearing on Gaming Rule 14, Gaming Tax, until approximately 9:55 a.m. on Thursday, May 23, 2024, at the Lakewood Division of Gaming Office and via Cisco Webex.

XIV. Fiscal Year 2025 Budget Requests

Matt Packard, Chief, Colorado State Patrol presented the area impact and budget requests for Colorado State Patrol (CSP). He distributed copies of the CSP annual report to the Commissioners and detailed that most of the intervention in gaming towns was spent on traffic incidents. He explained that in 2023, there was a nineteen percent reduction in fatalities on state roads when compared to 2022 and that in gaming towns/areas, there was only 1 fatality in 2023 and there were 5 in 2022. He stated that in total, there were 20 CSP uniformed members in gaming areas as well as 1 full time support person.

Discussion was had between the Commission and Chief Packard regarding the increase in personal services outlined in the budget request. Chief Packard and Terri Enderly, Budget Director, Colorado Department of Public Safety, explained that this $127,000 increase was due to rises in IT and employee benefits costs.

Chair Armstrong stated that he appreciated the partnership with Colorado State Patrol in Gilpin County and that a collaboration between the two organizations helped create and implement an active shooter policy over the past year.

The Commission voted unanimously to approve the Fiscal Year 2025 budget request of the Colorado State Patrol in the amount of $4,792,146.

Chris Brunette, Fire and Life Safety Section Chief, presented the fiscal year 2025 budget request for the Division of Fire Prevention and Control (DFPC) on behalf of Director Mike Morgan. He stated that the DFPC provided oversight to gaming communities for inspection of fire systems and fire suppression, and ensured those systems were installed and maintained properly. He explained that the DFPC also provided trainings in local jurisdictions. Chief Brunette stated that the Division consisted of two fire investigation teams and saw a minimal increase of 2.7% to cover common policy cost increases and a 3% salary increase.

Discussion was had between the Commission and Chief Brunette on the process of fire inspections for Black Hawk, Central City, and Cripple Creek. It was explained that DFPC aided in inspections in Black Hawk and Central City but the cities had final determination; whereas, in Cripple Creek, DFPC has sole authority to approve or deny fire inspections.

The Commission voted unanimously to approve the Fiscal Year 2025 budget request of the Division of Fire Prevention and Control in the amount of $237,875.

XV. Consideration of Organizational Matters

The Commission voted unanimously to approve the minutes from the February 15, 2024, and March 29, 2024, Public Sessions of Colorado Limited Gaming Control Commission, as presented.

Christopher Schroder, Director Division of Gaming, stated that due to scheduling conflicts, the May meeting of the Colorado Limited Gaming Control Commission (CLGCC) would be moved to Thursday, May 23, 2024, at 9:15 a.m. at the Lakewood Division of Gaming Office and via Cisco Webex. He also stated that there would soon be an opening for the registered voter member of the CLGCC, and that the Division was currently interviewing for the Certified Public Accountant and corporate business members of the Commission.

Bradford Jones, Senior Assistant Attorney General, stated that the election for Vice-Chair of the Commission would occur at the May 23rd meeting.

XVI. Opportunity for the Industry Members to Address the Commission

The Chair extended an opportunity for any members of the gaming industry to address the Commission regarding any current issues or events. No members of the gaming industry came forward.

XIII. Adjournment

The Commission voted unanimously to adjourn the April 14, 2024, meeting of the Colorado Limited Gaming Control Commission at 12:11 p.m. MDT.

Breanne Nolan, Secretary to the Colorado Limited Gaming Control Commission

Colorado Limited Gaming Control Commission

Minutes of Public Session
May 23, 2024

PUBLIC SESSION

I. Call to Order

Chair Armstrong called the May 23, 2024, meeting of the Colorado Limited Gaming Control Commission to order at 9:17 a.m. MDT in person at the 1707 Cole Blvd., Suite 300 Lakewood, CO 80401, Division of Gaming Office and virtually via Cisco Webex. Commissioners Tipton and Coleman were present in person, and a quorum existed.

Officials & Administrators in Attendance
Kevin Armstrong, Chair
Shawn Coleman, Vice-Chair
John Tipton, Commissioner
Michael Phibbs, Senior Director, Specialized Business Group
Christopher Schroder, Director
Kirsten Gregg, Chief of Investigations via Cisco Webex
Allen Hiserodt, Chief of Sports Betting
Kenya Collins, Director of Administration via Cisco Webex
Bradford Jones, Senior Assistant Attorney General
Paul Hogan, Chief Auditor
J. Wolff, Agent in Charge, Central City/Black Hawk
Bradley Nelson, Agent in Charge, Cripple Creek
John Madruga, Agent in Charge, Background Unit
Michael Payne, Table Games Chair
Breanne Nolan, Executive Assistant, Secretary to CLGCC

II. Vice Chair Election for Remainder of Fiscal Year 2023-2024

The Chair relinquished the floor to Senior Assistant Attorney General Bradford Jones to conduct the election for the Vice-Chair of the Colorado Limited Gaming Control Commission for the remainder of Fiscal Year 2023-2024.

Commissioner Tipton nominated Commissioner Coleman to serve as the Vice-Chair of the Colorado Limited Gaming Control Commission. Commissioner Coleman accepted the nomination and was elected as the Vice-Chair of the Colorado Limited Gaming Control Commission for the remainder of Fiscal Year 2023-2024.

Vice-Chair Coleman thanked his fellow Commissioners for their nomination and support.

EXECUTIVE SESSION

The Commission voted unanimously to go into the Executive Session pursuant to sections 24-6-402(3)(a) (III), 44-30-521(1)(a), 44-30-526(1)(d), and 44-30-1507 of the Colorado Revised Statutes to review confidential background licensing reports that were scheduled for consideration in the Public Session.

The Executive Session was called to order at 9:24 a.m. MDT.

PUBLIC SESSION

The Public Session was called back to order by Chair Armstrong at 9:53 a.m. MDT.

III. Approval of Licensing Actions

The Commission voted unanimously to approve the Renewal of the Retail and Master Licenses for G Investments, LLC d/b/a Colorado Grande Hotel and Casino. These Retail and Master licenses will expire two years from their current dates of expiration.

The reissuance of the above Master license does not concurrently grant approval to entities or individuals with whom this licensee has entered into or considered entering into contracts for sports betting operations or internet sports betting operations; nor does it preclude any entities or individuals from being called forward by the Division to conduct a comprehensive background investigation regarding their suitability to operate in Colorado.

The Commission voted unanimously to approve the First Vendor Minor Licenses and the Renewals of the Vendor Minor Licenses listed in the Consent Agenda in the May 2024 public materials. These Vendor Minor Licenses will expire two years from their dates of issuance and/or expiration.

IV. Opportunity for the Public to Address the Commission

The Chair gave anyone from the public an opportunity to address the Commission on any item not appearing in the agenda. No one from the public came forward for comment.

V. Consideration of Limited Gaming Financial Statements for March 2024

The Commission voted unanimously to approve the Statement of Gaming Revenues, Gaming Taxes, and Expenditures (unaudited) for the nine months ending on March 31, 2024, and to authorize its distribution.

VI. Consideration of Division Sports Betting Financial Statement for March 2024

The Commission voted unanimously to approve the Statement of Sports Betting Revenues, Taxes, and Expenditures (unaudited) for the nine months ending on March 31, 2024, and to authorize its distribution.

VII. Consideration of Limited Gaming Rules 10 & 21

The Commission voted unanimously to open the rulemaking hearing on Colorado Limited Gaming Rules 10 & 21.

Michael Payne, Table Games Chair, was sworn in and gave the presentation for Limited Gaming Rules 10 & 21.

Discussion was had between the Commission and Table Games Chair Payne regarding identification of betting sensor lens color for different wager amounts, under Rule 12 30-1254(5)(A).

Christopher Schroder, Director, Division of Gaming, was sworn in for comment. He stated that as the rules were written, the Division had no input on color; rather, requested that there be delineation between sensor color for a wager that was made on the progressive.

Commissioner Tipton stated that, based on comments, the rule be amended to add "color to be determined by the casino."

The Chair extended an opportunity for the public to testify on behalf of Limited Gaming Rules 10 & 21. No members of the public came forward to testify.

The Commission voted unanimously to close the public comment portion of the rulemaking hearing for Limited Gaming Rules 10 & 21.

The Commission voted unanimously to approve the amendments to Colorado Limited Gaming Rules 10 & 21, as amended, with added language, "as determined by the Casino" under Rule 12 30-1254(5)(A) as noted by the Commission and its counsel.

The Commission voted unanimously to close the rulemaking hearing on Colorado Limited Gaming Rules 10 & 21.

VIII. Fiscal Year 2025 Budget Requests

Kristi Piazza, Budget Manager, Specialized Business Group, presented the Fiscal Year 2025 Limited Gaming Budget Request. Discussion was had between the Commission, Budget Manager Piazza, and Director Christopher Schroder.

The Commission voted unanimously to approve the Fiscal Year 2025 Limited Gaming Budget Request in the amount of $22,271,423.

Kristi Piazza presented the Fiscal Year 2025 Responsible Gaming Fund Budget Request.

Bradford Jones, Senior Assistant Attorney General, made the motion to approve the Fiscal Year 2025 Responsible Gaming Fund Budget Request in the amount of $3,958,326. The Commission voted unanimously to accept the motion.

Kristi Piazza presented the Fiscal Year 2025 Sports Betting Budget Request. Discussion was had by the Commission and Budget Manager Piazza.

The Commission voted unanimously to approve the Fiscal Year 2025 Sports Betting Budget Request in the amount of $5,199,857.

IX. Rulemaking Hearing on Colorado Gaming Rule 14, Gaming Tax

The Commission voted unanimously to reopen the rulemaking hearing on Colorado Gaming Rule 14, Gaming Tax.

Paul Hogan, Chief Auditor, was sworn in and gave the report from the City of Black Hawk. The City of Black Hawk recommended that no change be made to the tax rate for fiscal year 2025.

Paul Hogan submitted the report from the City of Central into the record. He stated that the City of Central requested the tax rate remain unchanged for fiscal year 2025.

Paul Hogan presented the report from the County of Gilpin. He stated that the County of Gilpin requested that the "Colorado Limited Gaming Control Commission keep current tax rates in place for the upcoming fiscal year (FY25)," as stated in the County's report.

Paul Harris, Finance Director, City of Cripple Creek, was sworn in and presented the report for the City of Cripple Creek. He stated that the City of Cripple Creek requested no change to the tax rate for fiscal year 2025. Discussion was had by the Commission and Finance Director Harris regarding affordable housing options for casino workers.

Daniel Holmes, Partner and National Practice Leader for Gaming Services Practice, RubinBrown LLP, gave a presentation on gaming industry performance trends, as well as detailed gaming revenues statistics with regard to earnings and taxes of casinos within Colorado. Discussion was had between the Commission and Mr. Holmes regarding ratios of current assets over current liabilities which placed casinos into tax rate tiers.

Executive Session II

The Commission voted unanimously to go into Executive Session pursuant to sections 24-6-402(3)(a)(II) and (III) and 44-30-526(1) and (3) of the Colorado Revised Statutes to discuss confidential tax information of individual casinos and to receive legal advice regarding the Commission's tax authority, if necessary.

Executive Session II was called to order by Chair Armstrong at 11:04 a.m. MDT.

Public Session (reconvened)

The Public Session was called back to order by Chair Armstrong at 11:14 a.m. MDT.

The Chair extended an opportunity for members of the public to testify on behalf of Gaming Rule 14, Gaming Tax. No members of the public came forward to testify.

The Commission voted unanimously to close the public comment portion of the rulemaking hearing for Colorado Rule 14, Gaming Tax.

After public deliberation amongst the Commissioners, the Commission voted unanimously to make no change to Colorado Limited Gaming Rule 14, Gaming Tax, basis for fiscal year 2025.

The Commission voted unanimously to close the hearing on Gaming Rule 14, Gaming Tax.

X. Consideration of Organizational Matters

Michael Phibbs, Senior Director, Specialized Business Group, stated that a new building had been chosen for the new location of the Central City Division of Gaming office and that negotiations with the property owner had begun. He explained that moving the office into a more modern building was beneficial and that he hoped to report back on the progress of the move soon. He also detailed that during the 2024 legislative session, a bill to add a referendum to the ballot in November would give voters the ability to remove the cap on the $29 million in tax revenue that is kept by the State of Colorado, allowing the distribution of tax revenue to beneficiaries to be increased.

Senior Director Phibbs stated that himself as well as Christopher Schroder, Director of the Colorado Division of Gaming; Katherine Redhorse, Executive Director of the Colorado Commission of Indian Affairs; and Paul Hogan, Chief Auditor of the Division of Gaming, visited the Southern Ute and Ute Mountain Ute Divisions of Gaming. He stated that there were discussions regarding the Tribes' position of sovereignty, as well as collaborations on investigative issues, resource sharing, and the opportunity to partner on responsible gaming activities. He also stated that the Tribes requested to be considered stakeholders and to be included early on in any rulemaking or policy changes.

Lastly, Senior Director Phibbs explained that the Governor put together a proposal to allow the casinos located on Southern Ute and Ute Mountain Ute land to participate in online sports betting. He stated that this also involved negotiations between the Division of Gaming as well as Southern Ute and Ute Mountain Ute Divisions of Gaming, which proposed sharing background investigations, patron complaints, and suspensions. He said that he would leave it up to the Governor's Office to discuss specifics of these negotiations.

Christopher Schroder, Director Division of Gaming, stated that Kevin Hyland would be joining the Colorado Limited Gaming Control Commission in June as the Certified Public Accountant member.

XI. Opportunity for the Industry Members to Address the Commission

The Chair extended an opportunity for any members of the gaming industry to address the Commission regarding any current issues or events. No members of the gaming industry came forward.

XII. Adjournment

The Commission voted unanimously to adjourn the May 23, 2024, meeting of the Colorado Limited Gaming Control Commission at 11:28 a.m. MDT.

Breanne Nolan, Secretary to the Colorado Limited Gaming Control Commission

Colorado Limited Gaming Control Commission

Minutes of Public Session
June 20, 2024

PUBLIC SESSION

I. Call to Order

Chair Armstrong called the June 20, 2024, meeting of the Colorado Limited Gaming Control Commission to order at 9:20 a.m. MDT in person at the 1707 Cole Blvd., Suite 300 Lakewood, CO 80401, Division of Gaming Office and virtually via Cisco Webex. Commissioners Coleman, Tipton, and Hyland were present in person, and a quorum existed.

Officials & Administrators in Attendance
Kevin Armstrong, Chair
Shawn Coleman, Vice-Chair
John Tipton, Commissioner
Kevin Hyland, Commissioner
Christopher Schroder, Director
Kirsten Gregg, Chief of Investigations
Allen Hiserodt, Chief of Sports Betting
Kenya Collins, Director of Administration via Cisco Webex
Bradford Jones, Senior Assistant Attorney General
Paul Hogan, Chief Auditor
J. Wolff, Agent in Charge, Central City/Black Hawk
Bradley Nelson, Agent in Charge, Cripple Creek
John Madruga, Agent in Charge, Background Unit
Andrew Fulton, Agent in Charge, Sports Betting
Michael Payne, Table Games Chair
Breanne Nolan, Executive Assistant, Secretary to CLGCC

II. Introduction of New Commissioner

The Chair introduced Kevin Hyland as the Certified Public Accountant member of the Colorado Limited Gaming Control Commission.

Commissioner Hyland introduced himself and stated that he had previous experience working with the Colorado State Auditor's Office, the Division of Gaming, and the Colorado Bureau of Investigation. He explained that he currently worked for a large pension company as a senior investigator and that he was excited to serve as Commissioner.

Christopher Schroder, Director, Division of Gaming, stated that Governor Polis had appointed Kevin Hyland as a Commissioner on the Colorado Limited Gaming Control Commission pending his certification by the Colorado State Senate. Director Schroder administered the oath of office to Commissioner Hyland.

EXECUTIVE SESSION

The Commission voted unanimously to go into the Executive Session pursuant to sections 24-6-402(3)(a) (III), 44-30-521(1)(a), 44-30-526(1)(d), and 44-30-1507 of the Colorado Revised Statutes to review confidential background licensing reports that were scheduled for consideration in the Public Session.

The Executive Session was called to order at 9:27 a.m. MDT.

PUBLIC SESSION

The Public Session was called back to order by Chair Armstrong at 9:38 a.m. MDT.

III. Approval of Licensing Actions

Bradford Jones, Senior Assistant Attorney General, noted that there was a typo in the consent agenda that was posted on the Division's website and that Integrity Compliance 360 Inc. was a separate license from Panda Score S.A.S.

In accordance with Commission Policy 24-01, the Commission voted unanimously to approve the First Vendor Minor Licenses and Renewals of the Vendor Minor Licenses listed in the Consent Agenda in the June 2024 public packet.

IV. Opportunity for the Public to Address the Commission

The Chair gave anyone from the public an opportunity to address the Commission on any item not appearing in the agenda. No one from the public came forward for comment.

V. Consideration of Limited Gaming Financial Statements for April 2024

The Commission voted unanimously to approve the Statement of Gaming Revenues, Gaming Taxes, and Expenditures (unaudited) for the ten months ending on April 30, 2024, and to authorize its distribution.

VI. Consideration of Division Sports Betting Financial Statement for April 2024

The Commission voted unanimously to approve the Statement of Sports Betting Revenues, Taxes, and Expenditures (unaudited) for the ten months ending on April 30, 2024, and to authorize its distribution.

VII. Consideration of the Stipulation and Agreement in the Matter of PlayUp Interactive CO Inc.

Torrey Samson, Assistant Attorney General, presented the Stipulation and Agreement in the Matter of PlayUp Interactive CO Inc. Discussion was had between the Commission and Assistant Attorney General Samson.

The Commission voted unanimously to approve and authorize the Chair to sign the Stipulation and Agreement in Case No. DOG23002150 in the matter of PlayUp Interactive CO Inc. d/b/a PlayUp – Temporary Internet Sports Betting Operator License No. 94560453.

VIII. Consideration of Limited Gaming Rules 23 & 28

Bradford Jones, Senior Assistant Attorney General, stated that after consultation with Division of Gaming staff, it was recommended that Limited Gaming Rules 23 & 28 be tabled until the July 11, 2024, meeting of the Colorado Limited Gaming Control Commission to allow changes regarding clarity and conciseness to be made. Discussion was had between the Commission and Senior Assistant Attorney General Jones regarding the timeline of the edits to the rules.

The Commission voted unanimously to table Limited Gaming Rules 23 & 28 until the July 11, 2024, meeting of the Colorado Limited Gaming Control Commission.

IX. Consideration of Organizational Matters

Christopher Schroder, Director Division of Gaming, thanked Commissioner Coleman for his valued service as a member of the Commission and welcomed Commissioner Hyland. Director Schroder stated that he was celebrating his one-year anniversary with the Division and thanked Senior Director, Michael Phibbs, for hiring him as well as Division staff for their support and contributions to the Division's continued success. He then detailed accomplishments of each section of the Division including Field Operations, Audit, Technical Services Group, Licensing, Background Investigations, and Enforcement for both Limited Gaming and Sports Betting.

Commissioner Coleman gave departing remarks following his tenure as a member of the Colorado Limited Gaming Commission. He detailed the selection process he experienced through Governor Jared Polis' office and thanked the Governor for the opportunity. He also thanked his fellow Commissioners and Division for their collaboration over the last four years.

XI. Opportunity for the Industry Members to Address the Commission

The Chair extended an opportunity for any members of the gaming industry to address the Commission regarding any current issues or events. No members of the gaming industry came forward.

XII. Adjournment

The Commission voted unanimously to adjourn the June 20, 2024, meeting of the Colorado Limited Gaming Control Commission at 10:03 a.m. MDT.

Breanne Nolan, Secretary to the Colorado Limited Gaming Control Commission

Colorado Limited Gaming Control Commission

Minutes of Public Session
July 11, 2024

PUBLIC SESSION

I. Call to Order

Chair Armstrong called the July 11, 2024, meeting of the Colorado Limited Gaming Control Commission to order at 9:15 a.m. MDT in person at the 1707 Cole Blvd., Suite 300 Lakewood, CO 80401, Division of Gaming Office and virtually via Zoom. Commissioners Tipton and Hyland were present in person, and a quorum existed.

Officials & Administrators in Attendance
Kevin Armstrong, Chair
John Tipton, Commissioner Vice-Chair
Kevin Hyland, Commissioner
Christopher Schroder, Director
Kirsten Gregg, Chief of Investigations via Zoom
Allen Hiserodt, Chief of Sports Betting
Kenya Collins, Director of Administration via Zoom
Bradford Jones, Senior Assistant Attorney General
Paul Hogan, Chief Auditor
J. Wolff, Agent in Charge, Central City/Black Hawk
Bradley Nelson, Agent in Charge, Cripple Creek
John Madruga, Agent in Charge, Background Unit
Andrew Fulton, Agent in Charge, Sports Betting
Breanne Nolan, Executive Assistant, Secretary to CLGCC

II. Commissioner Elections Fiscal Year 2024-2025

Chair Armstrong relinquished the floor to Senior Assistant Attorney General, Bradford Jones, to conduct the elections for the Chair and Vice-Chair of the Colorado Limited Gaming Control Commission for fiscal year 2024-2025.

Senior Assistant Attorney General Jones opened nominations for the Chair. Commissioner Tipton nominated Commissioner Armstrong for the role as Chair and Commissioner Armstrong accepted the nomination. The Commission voted unanimously to elect Commissioner Armstrong as Chair of the Colorado Limited Gaming Control Commission (CLGCC) for fiscal year 2024-2025. Chair Armstrong stated that he was honored to represent the CLGCC and the State of Colorado in upholding the integrity of the gaming industry.

Nominations for Vice-Chair were opened, and Chair Armstrong nominated Commissioner Tipton. Commissioner Tipton accepted the nomination. The Commission voted unanimously to elect Commissioner Tipton as Vice-Chair of the Colorado Limited Gaming Control Commission

for fiscal year 2024-2025. Commissioner Tipton thanked his fellow Commissioners for their support and stated that he was honored to serve the CLGCC and State of Colorado.

EXECUTIVE SESSION

The Commission voted unanimously to go into the Executive Session pursuant to sections 24-6-402(3)(a) (III), 44-30-521(1)(a), 44-30-526(1)(d), and 44-30-1507 of the Colorado Revised Statutes to review confidential background licensing reports that were scheduled for consideration in the Public Session.

The Executive Session was called to order at 9:20 a.m. MDT.

PUBLIC SESSION

The Public Session was called back to order by Chair Armstrong at 9:54 a.m. MDT.

III. Approval of Licensing Actions

The Chair voted unanimously to approve the First Manufacturer/Distributor License for Kings, Queens, and Jacks, LLC d/b/a Saratoga Casino Black Hawk. The Manufacturer/Distributor License will expire two years from its date of issuance.

The Commission voted unanimously to approve the Change of Ownership of the Retail and Master Licenses for Kings, Queens, and Jacks, LLC d/b/a Saratoga Casino Black Hawk. The Retail and Master Licenses will expire two years form their current dates of expiration.

The Change of Ownership of the above Master license does not concurrently grant approval to entities or individuals with whom this licensee has entered into, or considered entering into contracts for sports betting operations or internet sports betting operations; nor does it preclude any entities or individuals from being called forward by the Division to conduct a comprehensive background investigation regarding their suitability to operate in Colorado.

The Commission voted unanimously to approve the Renewal of the Retail and Master Licenses for DOUBLE EAGLE RESORTS, INC. d/b/a Double Eagle Hotel & Casino. The Retail and Master Licenses will expire two years form their current dates of expiration.

The reissuance of the above Master license does not concurrently grant approval to entities or individuals with whom this licensee has entered into, or considered entering into contracts for sports betting operations or internet sports betting operations; nor does it preclude any entities or individuals from being called forward by the Division to conduct a comprehensive background investigation regarding their suitability to operate in Colorado.

The Commission voted unanimously to approve the Renewal of the Manufacturer/Distributor Licenses for DOUBLE EAGLE RESORTS, INC. d/b/a Double Eagle Hotel & Casino and LNW Gaming, Inc. The Manufacturer/Distributor licenses will expire two years from their current dates of expiration.

The Commission voted unanimously to approve the Renewal of the Operator Licenses for LNW Gaming, Inc. and COLORADO CASINO RESORTS, INC. The Operator Licenses will expire two years from their current dates of expiration.

The Commission voted unanimously to approve the Temporary Manufacturer/Distributor Licenses for Empire Technological Group, Ltd. And JCM American Corporation d/b/a JCM Global. The Manufacturer/Distributor Licenses were issued pending the final results of the Division's background investigations.

The Commission voted unanimously to approve the Renewal of the Vendor Major License for LNW Gaming, Inc. The Vendor Major License will expire two years from its current date of expiration.

The Commission voted unanimously to approve the First Internet Sports Betting Operator License and Sports Betting Operator Licenses for American Wagering, Inc. d/b/a Caesars Sportsbook. The Internet Sports Betting Operator License will expire two years from its date of issuance.

In accordance with Commission Policy 24-01, the Commission voted unanimously to approve the First Vendor Minor Licenses and Renewals of the Vendor Minor Licenses listed in the Consent Agenda in the July 2024 public packet. See attached.

IV. Opportunity for the Public to Address the Commission

The Chair gave anyone from the public an opportunity to address the Commission on any item not appearing in the agenda. No one from the public came forward for comment.

V. Consideration of Limited Gaming Financial Statements for May 2024

The Commission voted unanimously to approve the Statement of Gaming Revenues, Gaming Taxes, and Expenditures (unaudited) for the eleven months ending on May 31, 2024, and to authorize its distribution.

VI. Consideration of Division Sports Betting Financial Statement for May 2024

The Commission voted unanimously to approve the Statement of Sports Betting Revenues, Taxes, and Expenditures (unaudited) for the eleven months ending on May 31, 2024, and to authorize its distribution.

VII. Consideration of Limited Gaming Rules 23 & 28

The Commission voted unanimously to open the rulemaking hearing for Colorado Limited Gaming Rules 23 & 28.

Bradley Nelson, Agent in Charge, Cripple Creek Investigations, was sworn in and gave the presentation on Rules 23 & 28. Discussion was had between AIC Nelson and the Commission regarding field trials and rule location posting for Baccarat play, under Rule 28.

Bradford Jones, Senior Assistant Attorney General, reminded the Commission that Rules 23 & 28 were presented at the June Commission meeting but were tabled until July. Discussion was had between Senior AAG Jones and the Commission regarding changes made to the proposed rules.

The Chair gave an opportunity for the public to address the Commission on Rules 23 & 28. No members of the public came forward to testify.

After public deliberation, the Commission voted unanimously to approve the amendments to Colorado Limited Gaming Rules 23 & 28, as presented.

The Commission voted unanimously to close the rulemaking hearing for Rules 23 & 28.

VIII. Consideration of Organizational Matters

The Commission voted unanimously to approve the minutes from the May 23, 2024, and June 20, 2024, Public Sessions of Colorado Limited Gaming Control Commission, as presented.

Michael Phibbs, Senior Director, Specialized Business Group, stated that the current Division of Gaming office in Central City was in disrepair and due to the high costs associated with fixing the building, the Division was working on acquiring a new building in the Black Hawk area. He explained that the Department of Revenue was working to procure a lease on a new building, and that details of the acquisition would be presented to the Commission as soon as details were finalized. Discussion was had between Senior Director Phibbs and the Commission regarding parking accommodations, as well as access to the building. It was noted that parking would be shared with the Ameristar Casino, in its public parking structure, and that the Department of Law was negotiating the contract for the building lease.

Christopher Schroder, Director Division of Gaming, stated that interviews were scheduled for the next week to fill the remaining two positions on the Colorado Limited Gaming Control Commission. He was hopeful that an update would be shared in August.

XI. Opportunity for the Industry Members to Address the Commission

The Chair extended an opportunity for any members of the gaming industry to address the Commission regarding any current issues or events. No members of the gaming industry came forward.

XII. Adjournment

The Commission voted unanimously to adjourn the July 11, 2024, meeting of the Colorado Limited Gaming Control Commission at 10:18 a.m. MDT.

Breanne Nolan, Secretary to the Colorado Limited Gaming Control Commission

COLORADO
Department of Revenue
Specialized Business Group - Division of Gaming

1707 Cole Blvd Suite 300
Lakewood CO 80401

142 Lawrence Street
Central City CO 80427

330 W Carr Avenue
Cripple Creek CO 80813

July 2, 2024

CONSENT AGENDA

For the July 11, 2024, Colorado Limited Gaming Control Commission meeting

Dear Members of the Colorado Limited Gaming Control Commission,

The Division of Gaming submits this Consent Agenda for review and approval by the Colorado Limited Gaming Control Commission at its July 11th, 2024, meeting in accordance with Commission Policy 24-01 (approved March 29, 2024).

Under Commission Policy 24-01, the Commission may consider the listed matters as a group to be voted on and approved in mass upon a single motion. Upon a timely request, a Commissioner or the Director may remove any matter from the consent agenda for any reason. A request is timely if made prior to the vote on the consent agenda. If a matter is removed from this proposed consent agenda, then the Commission will consider and vote on the amended consent agenda before considering and voting on any removed matter(s) separately.

The Division proposes that the Commission approve the following new and renewal license applications for vendor minor sports betting licenses:

- *First Vendor Minor License for*
  - GAMING ASSOCIATES EUROPE LTD
  - Smart Gravity LLC
  - The Tenth Man Limited

- *Renewal of the Vendor Minor License for*
  - BetSwap Limited d/b/a BetSwap Technologies
  - Boardroom 35, LLC
  - Cyan Blue Odds USA Limited d/b/a Oddschecker
  - Gametime United Inc.
  - Incubeta US Corp d/b/a Incubeta US
  - Little Star Media USA Limited d/b/a Super Free Bets
  - NCC Group Security Services Inc
  - TheRundown, Inc.
  - Uniphore Technologies North America, Inc.
  - Wiseclicks Technologies Ltd

COLORADO
Department of Revenue
Specialized Business Group - Division of Gaming

1707 Cole Blvd Suite 300
Lakewood CO 80401

142 Lawrence Street
Central City CO 80427

330 W Carr Avenue
Cripple Creek CO 80813

Respectfully,

Andrew Fulton,
Agent in Charge Sports Betting and Fantasy Sports,
Colorado Division of Gaming

Colorado Limited Gaming Control Commission

Minutes of the Emergency Meeting
July 23, 2024

PUBLIC SESSION

I. Call to Order

Chair Armstrong called the July 23, 2024, emergency meeting of the Colorado Limited Gaming Control Commission to order at 1:15 PM MDT virtually via Zoom. Commissioners Tipton and Hyland were present via Zoom, and a quorum existed.

Officials & Administrators in Attendance – all via Zoom
Kevin Armstrong, Chair
John Tipton, Commissioner Vice-Chair
Kevin Hyland, Commissioner
Michael Phibbs, Senior Director Specialized Business Group
Christopher Schroder, Director
Kristi Piazza, Budget Manager, Specialized Business Group
Kirsten Gregg, Chief of Investigations
Allen Hiserodt, Chief of Sports Betting
Kenya Collins, Director of Administration
Bradford Jones, Senior Assistant Attorney General
Torrey Samson, Senior Assistant Attorney General
Vickie Floyd, Controller
Paul Hogan, Chief Auditor
J. Wolff, Agent in Charge, Central City/Black Hawk
Breanne Nolan, Executive Assistant, Secretary to CLGCC

II. Consideration of Supplemental Budget Changes for Fiscal Year 2025

Michael Phibbs, Senior Director, Specialized Business Group, presented the supplemental budget changes to the Limited Gaming Budget for fiscal year 2025. The presentation included details requesting an additional appropriation to the Division of Gaming in the amount of $495,500.00 to cover tenant improvements and moving costs associated with the relocation of the Central City Division Office. Kristi Piazza, Budget Manager, Specialized Business Group, and Christopher Schroder, Director, Division of Gaming were also present to make comments during the presentation.

Commissioner Hyland asked if there were any architectural service costs not listed in the budget outline. Senior Director Phibbs indicated that there were no architectural services costs.

Commissioner Hyland inquired about current issues with the Central City Office requiring the need for relocation. J. Wolff, Agent in Charge, responded that there is significant damage to the retaining walls around the Central City Office building due to erosion issues and the need for ADA compliance necessitated an extensive remodel to the back alley of the building. He

explained that the estimated total cost for just the back-alley fire escape and ADA compliant lift would be approximately $800,000. He then detailed that there are also interior issues such as ongoing plumbing issues, HVAC updates needed, and general remodel due to the ailing, historic structure of the building.

Commissioner Hyland asked if there would be additional supplemental budget changes for parking at a new office, or if parking was included in another line item within the request. Senior Director Phibbs indicated that the Ameristar casino had agreed to allow the Division to use its parking structure for parking at the new office location, and this was to be included in the lease agreement. He did not anticipate an additional supplement for parking and that the contingency monies would not be spent on parking.

Commissioner Tipton requested the amount the Division was asking for contingency. Senior Director Phibbs stated that the contingency money would ideally not be spent, but would account for additional moving costs, IT infrastructure costs, and furniture damage or replacement that may happen during the move. Commissioner Tipton stated that projects he had worked on in the past typically went over budget and he wanted to ensure the Division had accounted for enough contingency money to use in the event of extra spending. Senior Director Phibbs explained that approximately $83,000 would cover the physical move cost and the remaining $130,000 would include the contingency costs.

Commissioner Tipton asked if anything in the proposed budget accounted for FF&E. Senior Director Phibbs stated that there was a plan, through the Department of Revenue's Facilities Division, to resize DOR offices and that there was a whole office suite available in the Cole building that had furniture and fixtures which would supply the new Black Hawk office space.

Commissioner Tipton asked Agent in Charge Wolff if the new building schematics and space availability would be suitable for the Black Hawk Investigations Unit. AIC Wolff believed that the space would be sufficient and explained that he was included in the planning and tenant improvement processes. He stated that very little of the new building needed tenant improvement and that the transition would be simple.

Commissioner Tipton asked if the budget was approved, how the Commission would identify which lines were for the move and which lines were contingent. He explained that he would prefer to vote on those lines separately, as opposed to voting on the total of $172,000 for the total move cost. Senior Director Phibbs stated that approximately $83,000 would be used for the move itself and the remainder would be spent on unanticipated/contingent costs. He explained that these costs were based on an estimate from the Facilities Division and that the Department had not seen an official bid for the move.

Commissioner Tipton asked if a third-party moving company would be hired. Senior Director Phibbs stated that the Facilities Division would arrange hiring of the third-party company through pricing agreements and bidding.
Commissioner Tipton clarified whether approximately $122,550 of the budget would be for contingency costs and $83,000 would be spent on moving expenses. Senior Director Phibbs confirmed those totals and explained that they were roughly based on the estimates received.

Commissioner Tipton asked Division of Gaming Director, Christopher Schroder, if it was possible to break those costs down in the official budget request received by the Commission. Director Schroder stated that the Division would be happy to provide those breakdowns, but that the timeline for approval may be altered.

Commissioner Tipton suggested that a motion be made to adopt the proposed budget of $495,500 but that the Commission allocate $60,000 for moving and the remaining balance of $172,000 for contingency so that the Division could track costs of contingency versus moving. Senior Director Phibbs, through Breanne Nolan, Secretary to the CLGCC, provided a document listing official breakdown of costs to the Commission.

Senior Director Phibbs explained that the breakdown was actually as follows: contractor bid base, moving costs, card readers, cameras, window tint, window shades, signage all totaled at $83,000, while the remainder of the request would be for contingency purposes. He explained that some of these contingencies may include door locks and card readers to make the building more secure, yet accessible to staff. He detailed that the Department aimed to by fiscally responsible with moving costs and that things like signage, window tint, and window shades were not critical to operation; and, therefore, could wait and be purchased with surplus operating expenses at the end of fiscal year 25.

Commissioner Tipton asked which costs accounted for the total line of $172,550. Senior Director Phibbs stated that the budget was created by the Facilities Department but that the breakdown was sent via email. Chair Armstrong explained that, from his understanding, $322,950 in construction costs and $83,000 for moving costs would leave a balance of $89,550 for contingency.

Commissioner Tipton asked if the Commission could vote on these totals and factor in additional contingency, to total the $172,550, that the Department of Revenue and Division of Gaming seem to think it will spend so that the Commission will not have vote on additional budget requests in the future. Senior Director Phibbs stated that three separate motions, for three separate line items, could be made. He deferred to counsel and the budget manager to confirm whether these separate motions could be made.

Kristi Piazza, Budget Manager, Specialized Business Group, stated that from a budget perspective, it would be required to have the total lump sum approved or not approved but could breakdown the moving costs and contingency in further detail.

Senior Assistant Attorney General, Bradford Jones, explained that the Commission could make separate motions or could vote on the total lump sum with the following allocations: $322,950 for tenant improvements, $83,000 for moving costs, and $89,550 for contingency.

Commissioner Tipton stated that he would like to make three separate motions, one for each budget line, but that he wanted to defer to his fellow Commissioners for their thoughts. Commissioner Hyland stated that, based on current experience and employer, contingency rates are approximately 35% of the total budget. He suggested that, as Commissioner Tipton had

alluded to earlier, real estate costs typically go over budget; therefore, contingency should be voted on separately.

Senior Assistant Attorney General Jones recommended that the Commission approve the total amount proposed, as there was documentation supporting the requested amounts and that if there was a need to increase the contingency fee, there would have to be a supplemental budget request made in the future. He stated that additional information and documentation would be provided in such an instance of an additional request, with a set dollar amount.

Commissioner Tipton stated that $89,000 in contingency costs was close to Commissioner Hyland's suggestion of 30%.

Chair Armstrong thanked his fellow Commissioners as well as Department of Revenue and Division of Gaming staff for their comments.

The Commission voted unanimously to approve the $495,500 increase to the Limited Gaming Operating Budget, appropriation TCCCE1003, for fiscal year 2025 with the understanding of the following allocations: $322,950 for tenant improvement costs, $89,550 for contingency fees and costs, and $83,000 for moving costs and any additional improvements.

III. Adjournment

The Commission voted unanimously to adjourn the July 23, 2024, emergency meeting of the Colorado Limited Gaming Control Commission at 1:47 PM.

Breanne Nolan, Secretary to the Colorado Limited Gaming Control Commission

Colorado Limited Gaming Control Commission

Minutes of Public Session
August 22, 2024

PUBLIC SESSION

I. Call to Order

Chair Armstrong called the August 22, 2024, meeting of the Colorado Limited Gaming Control Commission to order at 9:15 a.m. MDT in person at the Department of Revenue Office at 1881 Pierce St., Lakewood, CO 80214, and virtually via Zoom. Commissioners Tipton, Hyland, and George were present in person, and a quorum existed.

Officials & Administrators in Attendance
Kevin Armstrong, Chair
John Tipton, Commissioner Vice-Chair
Kevin Hyland, Commissioner
Ahilya George, Commissioner
Christopher Schroder, Director
Kirsten Gregg, Chief of Investigations via Zoom
Kenya Collins, Director of Administration via Zoom
Bradford Jones, Senior Assistant Attorney General
Torrey Samson, Senior Assistant Attorney General via Zoom
Paul Hogan, Chief Auditor
J. Wolff, Agent in Charge, Central City/Black Hawk
Bradley Nelson, Agent in Charge, Cripple Creek
John Madruga, Agent in Charge, Background Unit
Andrew Fulton, Agent in Charge, Sports Betting
Ryan Galbreath, Investigator
Katherine Ford, Investigator
Charles Schoepflin, Investigator
Melinda Schubert, Investigator
Breanne Nolan, Executive Assistant, Secretary to CLGCC

II. Swearing in of Commissioner George

Chair Armstrong introduced Ahilya George as the newest member of the Colorado Limited Gaming Control Commission, filling the role of the corporate manager with five years of experience.

Commissioner George introduced herself and stated that she was excited about giving back to the citizens of Colorado and working with the Commission and Division of Gaming.

Christopher Schroder, Director, Division of Gaming, administered the oath of office and officially swore in Commissioner George as a member of the Colorado Limited Gaming Control Commission.

III. Swearing in of Investigators

Chair Armstrong administered the oath to and appointed Ryan Galbreath, Katherine Forde, Charlie Schoepflin, and Melinda Schubert, Investigators for the Colorado Division of Gaming effective on their respective dates of hire.

EXECUTIVE SESSION

The Commission voted unanimously to go into the Executive Session pursuant to sections 24-6-402(3)(a)(III), 44-30-521(1)(a), 44-30-526(1)(d), and 44-30-1507 of the Colorado Revised Statutes to review confidential background licensing reports that were scheduled for consideration in the Public Session.

The Executive Session was called to order at 9:31 a.m. MDT.

PUBLIC SESSION

The Public Session was called back to order by Chair Armstrong at 10:26 a.m. MDT.

IV. Approval of Licensing Actions

The Commission voted unanimously to approve the First Manufacturer/Distributor License for Acres Manufacturing Company. The Manufacturer/Distributor License will expire two years from its date of issuance.

The Commission voted unanimously to approve the Renewal of the Manufacturer/Distributor License for Aces Up Gaming Inc. This Manufacturer/Distributor License will expire two years from its current date of expiration.

The Commission voted unanimously to approve the Temporary Reissuance of the Vendor Major Licenses for GAN NEVADA, INC.; GBG ENDEAVORS LLC d/b/a MetaBet; NeoGames Solutions LLC d/b/a NeoGames; SimpleBet, Inc.: SIS CONTENT SERVICES, INC.; and Sports IQ Analytics Inc. The Vendor Major Licenses were issued pending the final results of the Divison's background investigations.

Bradford Jones, Senior Assistant Attorney General, stated the based on conflict of interest, under Commission Policy 24-01, the Commission can remove a license renewal or new application from the consent agenda. He explained that BMM International LLC would be removed from the consent agenda and voted on in a separate motion due to a conflict with a commissioner.

Prior to calling for a motion on the Sports Betting Licensing Actions, Chair Armstrong noted that there is an issue of licensees not submitting their renewal applications within 120 days of their renewal date. Commissioner Tipton stated that this issue was becoming burdensome to Division staff, requiring warning letters to be issued and multiple follow up calls to be made. Commissioner Hyland agreed that the failure to renew within 120 days was an important issue that needed more attention and accountability from licensees. Commissioner George stated that focusing on problem areas like this should be prioritized by the Division and that resolution was critical.

In accordance with Commission Policy 24-01, the Commission voted unanimously to approve the First Vendor Minor Licenses and Renewals of the Vendor Minor Licenses listed in the Consent Agenda in the August 2024 public packet.

Commissioners Armstrong, Hyland, and George voted to approve the First Vendor Minor License for BMM INTERNATIONAL LLC. Commissioner Tipton recused himself from the vote due to a conflict. The Vendor Minor License will expire two years from its date of issuance.

V. Opportunity for the Public to Address the Commission

The Chair gave anyone from the public an opportunity to address the Commission on any item not appearing in the agenda. No one from the public came forward for comment.

VI. Consideration of Limited Gaming Financial Statements for June 2024

Vickie Floyd, Controller, Division of Gaming, presented the Limited Gaming Financial Statements for June 2024. Discussion was had between Commissioner Hyland and Controller Floyd regarding the differences between the Responsible Gaming budget lines from 2023 and 2024.

The Commission voted unanimously to approve the Statement of Gaming Revenues, Gaming Taxes, and Expenditures (unaudited) for the twelve months ending on June 30, 2024, and to authorize its distribution.

VII. Consideration of Limited Gaming and Extended Gaming Fund Distribution for Fiscal Year 2024

Tseko Ivanov, Reporting Accountant, Division of Gaming, presented the Fiscal Year 2024 Distribution of the Limited Gaming Fund and the Extended Gaming Fund. Discussion was had between the Commission and Tseko Ivanov regarding the processing of the distribution disbursement. It was confirmed that the deadline for the disbursement was September 1st; therefore, would be completed on the last business day of August.

The Commission voted unanimously to certify the Fiscal Year 2024 Distribution of the Limited Gaming Fund and the Extended Gaming Fund as presented by the Division.

VIII. Consideration of Division Sports Betting Financial Statement for June 2024

The Commission voted unanimously to approve the Statement of Sports Betting Revenues, Taxes, and Expenditures (unaudited) for the twelve months ending on June 30, 2024, and to authorize its distribution.

IX. Consideration of Colorado Limited Gaming Regulation 30-1403 Tax Rate Adjustments & Resulting Refunds

Paul Hogan, Chief Auditor, submitted into the record the data provided to the Commission regarding Colorado Limited Gaming Regulation 30-1403 Tax Rate Adjustments & Resulting Refunds. Discussion was had by the Commission, Chief Auditor Hogan and Senior Assistant Attorney General Jones regarding the trial program and data requirements to continue. It was

determined that if a 3.5% growth in EPC credits is met each year, the pilot program continues and ends if the growth rate and other benchmarks are not met.

The Commission voted unanimously to approve the tax rate adjustments proposed by the Division of Gaming in accordance with Colorado Limited Gaming Regulation 30-1403. The tax rate adjustments under Gaming Regulation 30-1403 would be applied through the use of tax credits for use by each individual casino. The electronic promotional credits totaling $1,825,852.66 would be allocated to the casinos based on each casino's reported share of electronic promotional credits.

VIII. Consideration of Organizational Matters

The Commission voted unanimously to approve the minutes from the July 11, 2024, Public Session of Colorado Limited Gaming Control Commission, as presented.

Michael Phibbs, Senior Director, Specialized Business Group, explained that following the findings of the third-party consulting firm which analyzed best law enforcement practices for the Division, body worn camera procurement was in process. He stated that the Division applied for federal grants to receive the cameras and would find out in September if it received the funds. He also explained that a new licensing processing and reporting system was in the works and budget impacts would be seen in December. He explained that the Department of Revenue had transferred ownership of the Pierce Office to History Colorado for its artifact storage and procurement projects. He detailed that the Department had outgrown the building and an announcement regarding the relocation of the Divisions within the Pierce building would be made in the future. Finally, Senior Director Phibbs stated that there would be a referendum on the ballot in November which would remove the $29 million cap on the revenue collected on sports betting taxes. This ballot would allow the Division of Gaming to keep more than $29 million dollars for funding and keep the distribution amounts the same for the water conservation board.

Christopher Schroder, Director Division of Gaming, stated that he was hopeful the Colorado Limited Gaming Control Commission would have its final member, a CPA with 5 years of corporate experience, filled by October.

XI. Opportunity for the Industry Members to Address the Commission

The Chair extended an opportunity for any members of the gaming industry to address the Commission regarding any current issues or events. No members of the gaming industry came forward.

XII. Adjournment

The Commission voted unanimously to adjourn the July 11, 2024, meeting of the Colorado Limited Gaming Control Commission at 11:10 a.m. MDT.

Breanne Nolan, Secretary to the Colorado Limited Gaming Control Commission

Colorado Limited Gaming Control Commission

Minutes of Public Session
September 19, 2024

PUBLIC SESSION

I. Call to Order

Chair Armstrong called the September 19, 2024, meeting of the Colorado Limited Gaming Control Commission to order at 9:17 a.m. MDT in person at the Division of Gaming Office at 1707 Cole Blvd., Suite 300, Lakewood, CO 80401, and virtually via Zoom. Commissioners Tipton, Hyland, and George were present in person, and a quorum existed.

Officials & Administrators in Attendance
Kevin Armstrong, Chair
John Tipton, Commissioner Vice-Chair
Kevin Hyland, Commissioner
Ahilya George, Commissioner
Michael Phibbs, Senior Director, Specialized Business Group
Christopher Schroder, Director
Kirsten Gregg, Chief of Investigations
Kenya Collins, Director of Administration via Zoom
Bradford Jones, Senior Assistant Attorney General
Torrey Samson, Senior Assistant Attorney General
Paul Hogan, Chief Auditor
J. Wolff, Agent in Charge, Central City/Black Hawk
Bradley Nelson, Agent in Charge, Cripple Creek
John Madruga, Agent in Charge, Background Unit
Andrew Fulton, Agent in Charge, Sports Betting
Breanne Nolan, Executive Assistant, Secretary to CLGCC

EXECUTIVE SESSION

The Commission voted unanimously to go into the Executive Session pursuant to sections 24-6-402(3)(a)(III), 44-30-521(1)(a), 44-30-526(1)(d), and 44-30-1507 of the Colorado Revised Statutes to review confidential background licensing reports that were scheduled for consideration in the Public Session.

The Executive Session was called to order at 9:22 a.m. MDT.

PUBLIC SESSION

The Public Session was called back to order by Chair Armstrong at 9:55 a.m. MDT.

II. Approval of Licensing Actions

The Commission voted unanimously to approve the First Retail and Master Licenses for RMG JN LLC d/b/a Johnny Nolon's Casino and RMG CG LLC d/b/a Colorado Grand Casino. The Retail and Master Licenses will expire two years from their dates of issuance.

The issuance of the above Master licenses does not concurrently grant approval to entities or individuals with whom these licensees have entered into, or considered entering into contracts for sports betting operations or internet sports betting operations; nor does it preclude any entities or individuals from being called forward by the Division to conduct a comprehensive background investigation regarding their suitability to operate in Colorado.

The Commission voted unanimously to approve the First Manufacturer/Distributor License for Rocky Mountain Gaming CC LLC. This Manufacturer/Distributor License will expire two years from its date of issuance.

The Commission voted unanimously to approve the First Operator License for Rocky Mountain Gaming CC LLC. This Operator License will expire two years from its date of issuance.

The Commission voted unanimously to approve the Renewal of the Retail and Master Licenses for Dostal Alley, Inc. d/b/a Dostal Alley; CCSC/BLACKHAWK, INC. d/b/a Lady Luck Casino Black Hawk; and ISLE OF CAPRI BLACK HAWK, LLC d/b/a Horseshoe Black Hawk. The Retail and Master Licenses will expire two years from their current dates of expiration.

The reissuance of the above Master licenses does not concurrently grant approval to entities or individuals with whom these licensees have entered into, or considered entering into contracts for sports betting operations or internet sports betting operations; nor does it preclude any entities or individuals from being called forward by the Division to conduct a comprehensive background investigation regarding their suitability to operate in Colorado.

The Commission voted unanimously to approve the renewal of the Operator Licenses for CCSC/BLACKHAWK, INC. d/b/a Lady Luck Casino Black Hawk. This Operator License will expire two years from its current date of expiration.

The Commission voted unanimously to approve the Renewal of the Manufacturer/Distributor Licenses for IOC-BLACK HAWK DISTRIBUTION COMPANY, LLC. These Manufacturer/Distributor Licenses will expire two years from their current dates of expiration.

The Commission voted unanimously to approve the Change of Ownership of the Retail, Master, and Manufacturer/Distributor Licenses for Kings, Queens, and Jacks, LLC d/b/a Saratoga Casino Black Hawk. These Retail, Master, and Manufacturer/Distributor Licenses will expire two years from their current dates of expiration.

The Commission voted unanimously to approve the First Vendor Major License for ONLINE VENTURE STRATEGIES, LLC. This Vendor Major License will expire two years from its date of issuance.

In accordance with Commission Policy 24-01, the Commission voted unanimously to approve the First Vendor Minor Licenses and Renewals of the Vendor Minor Licenses listed in the Consent Agenda in the September 2024 public packet.

III. Opportunity for the Public to Address the Commission

The Chair gave anyone from the public an opportunity to address the Commission on any item not appearing in the agenda.

Michael Gaughan, Rocky Mountain Gaming CC LLC, thanked the Commission for the issuance of the Retail and Master Licenses for Johnny Nolon's Casino and Colorado Grand Casino, as well as the Manufacturer/Distributor and Operator Licenses for Rocky Mountain Gaming CC LLC.

IV. Consideration of Limited Gaming Financial Statements for July 2024

The Commission voted unanimously to approve the Statement of Gaming Revenues, Gaming Taxes, and Expenditures (unaudited) for the first month ending on July 31, 2024, and to authorize its distribution.

V. Consideration of Division Sports Betting Financial Statement for July 2024

The Commission voted unanimously to approve the Statement of Sports Betting Revenues, Taxes, and Expenditures (unaudited) for the first month ending on July 31, 2024, and to authorize its distribution.

VI. Consideration of Sports Betting Fund Distribution for Fiscal Year 2024

Ryan Golden, Deputy Controller, Division of Gaming, presented the Fiscal Year 2024 Distribution of the Sports Betting Fund. Discussion was had between Commissioner Hyland and Controller Vickie Floyd regarding ballot measure JJ, which would remove the $29 million cap on sports betting taxes collected by the Division of Gaming, eliminating the refund of tax dollars to casinos/operators. Commissioner Hyland asked Vickie Floyd if a supplemental budget change would need to be made. Vickie Floyd explained that a supplemental budget change would not need to be made, as the funds would be transferred to the Sports Betting Fund, and a new fund would not be established.

The Commission voted unanimously to certify the Fiscal Year 2024 Distribution of the Sports Betting Fund, as presented by the Division, in the amount of $29,974,019.46.

VII. Consideration of Limited Gaming Rule 4, Regulation 30-409.5

The Commission voted unanimously to open the rulemaking hearing on Colorado Limited Gaming Rule 4, Regulation 30-409.5.

Christopher Schroder, Director, Division of Gaming, was sworn in and gave the presentation on Rule 4, Regulation 30-409.5. The Commission and Director Schroder discussed the process of temporary license (badge) issuance to employees who may forgotten their credentials. Director Schroder explained that this would require an employee/licensee to go through the license (badge) reissuance process, as opposed to borrowing a temporary license.

The Chair gave anyone from the public and opportunity to address the Commission on Colorado Limited Gaming Rule 4, Regulation 30-409.5. No members of the public came forward to testify.

The Commission voted unanimously to close the public comment portion of the rulemaking hearing.

Following deliberations, the Commission voted unanimously to approve the amendments to Colorado Limited Gaming Rule 4, Regulation 30-409.5, as presented.

The Commission voted unanimously to close the rulemaking hearing on Colorado Limited Gaming Rule 4, Regulation 30-409.5.

VIII. Review of Status Reports from the FY24 Responsible Gaming Grant Recipients

Corrie Martinez, Responsible Gaming Manager, submitted the FY24 Responsible Gaming Grant Recipient status reports into the record. She allowed representatives from each organization to give brief presentations to the Commission and answer any questions.

Jamie Glick, President, Problem Gambling Coalition of Colorado (PGCC), presented the milestones and goals for the following PGCC projects: Problem Gambling Center Project and the Awareness and Education Project – Year 2. Niles Koenigsberg, Marketing Manager of The Idea Marketing, and Brittany Beath, Marketing Manager of The Idea Marketing, discussed updates regarding the PGCC Awareness and Education Project – Year 2.

The Commission, Niles Koenigsberg, and Brittany Beath discussed the demographics reached through the PGCC Awareness & Education Project ad campaign. It was determined that through this second campaign, individuals targeted were between the ages of 25 to 45 and included Black, Indigenous, and People of Color, and other marginalized groups (BIPOC).

Dishi Umfleet, Operations Director of Kindbridge Research Institute, Mark Lucia, Program Manager (Military and Data) of Kindbridge Research Institute, and Laura Caster, Contractor of Kindbridge Research Institute, presented details regarding the following Kindbridge Research Institute Projects: Screening and Telehealth Enhancement for Gambling Disorder Initiative in Colorado (STEGD), Colorado Military Program Gambling Research, Education & Recovery Program – Phase 2, Athlete Well-Being – Phase 2, Healthy Gaming Education Project (HGEP), and Standford Gambling Addiction Therapy Study (SGATS).

Tthe Commission, Dishi Umfleet, and Laura Caster discussed the age groups of children participating in the Healthy Gaming Education Program (HGEP). It was determined that the current education materials were being developed for gambling prevention education for 7- to-11 year-olds and their parents, so that they may gain understanding of how to identify and navigate problem gambling behaviors. There was also discussion regarding attempts to establish a partnership with Kindbridge and the Denver Public School system to provide education through HGEP.

The Commission, Dishi Umfleet, and Mark Lucia discussed the outreach accomplished through the Colorado Military Program Research, Education & Recovery Program – Phase 2. Marck Lucia explained that Kindbridge had been in contact with the Fort Carson United States Army post to distribute education, resources, and physical services to active-duty military members. He stated that Fort Carson representatives seemed very open to the program and outreach. Dishi Umfleet detailed that Kindbridge's veterans education project leader was in contact with Buckley Airforce Base to set up meetings to get involved in disseminating education materials.

Corrie Martinez, Responsible Gaming Manager, thanked the Commission and grant recipients for their discussions, then concluded that status report presentation.

IX. Consideration of Organizational Matters

The Commission voted unanimously to approve the minutes from the July 23 & August 22, 2024, Public Sessions of Colorado Limited Gaming Control Commission, as presented.

Michael Phibbs, Senior Director of the Specialized Business Group, explained that the Department of Revenue and Division of Gaming were still working on lease negotiations for the Black Hawk Division office relocation project. He also stated that the Division of Gaming had planned to provide field investigators with uniforms and that the vendor had experienced some delays, but the uniforms were expected to roll-out in December. Senior Director Phibbs stated that the State of Colorado was working on a digital driver's license program. He explained that the identifications cards/driver's licenses (ID) could be stored in a Google or Apple Wallet on an individual's electronic device and that it would be biometrically verified and presented as a valid state ID card. He stated that a 30-minute presentation would be given at an upcoming meeting detailing the specifics of the mobile driver's license project and how it could be incorporated into Division and gaming operator practices.

Christopher Schroder, Director of the Division of Gaming, announced that members of the Nebraska Racing and Gaming Division were present and had been working with the Division all week to determine efficiencies and strategies between the two groups. He stated that the Nebraska Division members were also present for the Rocky Mountain Sports Betting Working Group that was held on September 18th. He explained that the working group met quarterly and was comprised of the Division, as well as regulators from other states in partnership with college athletics departments and professional athletics associations. He stated that a new Commissioner would begin in October, allowing the Commission to operate with a full five members. He explained that the Division had its bi-annual meeting with the Southern Ute Tribe Division of Gaming where collaboration on ongoing issues and efforts were discussed. Director Schroder stated that the Division would give its status report on the current fixed odds wagering trial at the October 17, 2024, meeting of the Colorado Limited Gaming Control Commission. He also stated that September was Responsible Gaming Awareness and Education Month and that he was proud of the work done by the Division and its stakeholders on responsible gaming, highlighting the work done by Responsible Gaming Manager, Corrie Martinez.

Director Schroder recognized the retirement of Division of Gaming Controller, Vikie Floyd, and highlighted her outstanding work and achievements with the Division over the last 30 years. Vickie Floyd thanked Director Schroder for his kind words. She explained that she was proud that the Division had received clean audits every year since she joined in 1994 and that the Division was considered a role model for the Department. She recalled that when the Marijuana Enforcement Division was started, she was contacted by the head of Internal Audit for the Department of Revenue and asked if Gaming's accounting procedures could be sent over as a model for the new accounting department. She explained that through challenges and changes over the years, she would not have been successful without those who came before her, such as Commissioner Hyland who had trained her in her first position as Accounting Technician. She credited success to her dedicated staff and recognized Michele Routzon, Tseko Ivanov, and Ryan

Golden for their hard work. She stated that the accounting department would be left in great hands with her staff, Director Schroder, and an accomplished senior staff.

Chair Armstrong thanked Vickie Floyd for her dedication and service to the State of Colorado and Division of Gaming.

X. Opportunity for the Industry Members to Address the Commission

The Chair extended an opportunity for any members of the gaming industry to address the Commission regarding any current issues or events. No members of the gaming industry came forward.

XI. Adjournment

The Commission voted unanimously to adjourn the September 19, 2024, meeting of the Colorado Limited Gaming Control Commission at 11:22 a.m. MDT.

Breanne Nolan, Secretary to the Colorado Limited Gaming Control Commission

Colorado Limited Gaming Control Commission

Minutes of Public Session
October 17, 2024

PUBLIC SESSION

I. Call to Order

Vice-Chair Tipton called the October 17, 2024, meeting of the Colorado Limited Gaming Control Commission to order at 9:16 a.m. MDT in person at the Division of Gaming Office at 1707 Cole Blvd., Suite 300, Lakewood, CO 80401, and virtually via Zoom. Commissioners Hyland, George, and Workman were present in person, and a quorum existed**.** Chair Armstrong was excused for good cause.

Officials & Administrators in Attendance
John Tipton, Commissioner Vice-Chair
Kevin Hyland, Commissioner
Ahilya George, Commissioner
Phil Workman, Commissioner
Michael Phibbs, Senior Director, Specialized Business Group
Christopher Schroder, Director
Kirsten Gregg, Chief of Investigations via Zoom
Kenya Collins, Director of Administration via Zoom
Bradford Jones, Senior Assistant Attorney General
Torrey Samson, Senior Assistant Attorney General
Paul Hogan, Chief Auditor
J. Wolff, Agent in Charge, Central City/Black Hawk
Bradley Nelson, Agent in Charge, Cripple Creek
John Madruga, Agent in Charge, Background Unit
Andrew Fulton, Agent in Charge, Sports Betting
Dane Albin, Supervisory Investigator, Cripple Creek
Michael Payne, Table Games Chair
Breanne Nolan, Executive Assistant, Secretary to CLGCC

II. Swearing in of Commissioner Workman

Vice Chair Tipton welcomed Phil Workman as the newest member of the Colorado Limited Gaming Control Commission, filling the role as its registered voter member.

Commissioner Workman introduced himself and stated that he was looking forward to the experience serving as a Gaming Commissioner. He detailed growing up in Nebraska and his experience working as a policy analyst and project manager for the City and County of Denver.

Christopher Schroder, Director, Division of Gaming, administered the oath of office and officially swore in Commissioner Workman as a member of the Colorado Limited Gaming Control Commission.

EXECUTIVE SESSION

The Commission voted unanimously to go into the Executive Session pursuant to sections 24-6-402(3)(a)(III), 44-30-521(1)(a), 44-30-526(1)(d), and 44-30-1507 of the Colorado Revised Statutes to review confidential background licensing reports that were scheduled for consideration in the Public Session, as well as review the confidential status report for Sports Betting Rule 5.4.

The Executive Session was called to order at 9:20 a.m. MDT.

PUBLIC SESSION

The Public Session was called back to order by Vice-Chair Tipton at 10:21 a.m. MDT.

III. Approval of Licensing Actions

The Commission voted unanimously to approve the Renewal of the Retail and Master Licenses for GNCC, LLC d/b/a Golden Nugget. The Retail and Master Licenses will expire two years from their current dates of expiration.

The reissuance of the above Master license does not concurrently grant approval to entities or individuals with whom this licensee has entered into or considered entering into contracts for sports betting operations or internet sports betting operations; nor does it preclude any entities or individuals from being called forward by the Division to conduct a comprehensive background investigation regarding their suitability to operate in Colorado.

The Commission voted unanimously to approve the Reissuance of the Temporary Vendor Major Licenses for BetMakers MTS, LLC and Better Collective USA, Inc. d/b/a Better Collective. These Temporary Vendor Major Licenses were issued pending the final results of the Division's background investigations.

The Commission voted unanimously to approve the Renewal of the Vendor Major License for PT Services (Delaware) LLC. This Vendor Major License will expire two years from its current date of expiration.

In accordance with Commission Policy 24-01, the Commission voted unanimously to approve the First Vendor Minor Licenses and Renewals of the Vendor Minor Licenses listed in the Consent Agenda in the October 2024 public packet.

The Commission voted unanimously to approve the modification for PointsBet Colorado LLC's licenses, numbers 37255440 and 37255441, of a D/B/A Name Change, allowing two new "Doing Business As" registrations to include Fanatics Betting and Gaming, as well as Fanatics Sportsbook. This modification does not otherwise modify PointsBet Colorado LLC's licenses, including the expiration dates.

IV. Opportunity for the Public to Address the Commission

The Chair gave anyone from the public an opportunity to address the Commission on any item not appearing in the agenda. No members of the public came forward.

V. Consideration of Limited Gaming Financial Statements for August 2024

The Commission and Tseko Ivanov, Reporting Accounting, discussed the increased costs of the "automobile line" of the financial statements. Tseko Ivanov explained that these extra costs were associated with increased vehicle numbers from 37 to 41 and insurance fees which increased from $16 to $29. Michael Phibbs, Senior Director of the Specialized Business Group, explained that fleet service costs change year to year based on usage and that the increase would be related to last year's operational costs, fuel costs, and repair costs.

Commissioner Hyland asked if the increase in materials, supplies, and services was related to the new Black Hawk office space move. Tseko Ivanov responded that the costs for the new space would come out of the "Operating Expenses" line and that the materials supplies, and services was related building maintenance, custodial fees, or supplies for any of the three Division offices. He explained that in the future, a detailed report showing variances of cost increases or decreases could be included in the financial statement memo.

The Commission voted unanimously to approve the Statement of Gaming Revenues, Gaming Taxes, and Expenditures (unaudited) for the two months ending on August 31, 2024, and to authorize its distribution.

VI. Consideration of Division Sports Betting Financial Statement for August 2024

The Commission voted unanimously to approve the Statement of Sports Betting Revenues, Taxes, and Expenditures (unaudited) for the two months ending on August 31, 2024, and to authorize its distribution.

VII. Consideration of Supplemental Budget Changes – Division of Gaming FY24-25

Kristi Piazza, Budget Manager, Specialized Business Group presented the Fiscal Year 24-25 Supplemental Budget Changes for the Division of Gaming.

The Commission voted unanimously to approve the decrease of $13,077 to the Limited Gaming Budget for Fiscal Year 24-25.

The Commission voted unanimously to approve the increase of $1,300 to the Sports Betting Budget for Fiscal Year 24-25.

VIII. Consideration of Organizational Matters

Approval of the minutes from the September 19, 2024, public session of the Colorado Limited Gaming Control Commission were moved to the November 21st meeting.

Michael Phibbs, Senior Director of the Specialized Business Group, gave an update regarding the Black Hawk Division of Gaming office move. He stated that there were ongoing lease negotiations between the Department of Revenue and the building owner. He explained that construction could not begin until the negotiations had been reached, but that the construction bids were valid until December and the Department was hopeful it would not have to put the

project back out to bid. Commissioner Hyland asked if there was an update regarding the status of the federal grant to provide body cameras to the Division. Senior Director Phibbs responded that the Division was supposed to receive an update in September, but there had not been further correspondence from the grant program coordinators. Commissioner Hyland asked if there were any updates regarding uniform implementation for Division investigators. Senior Director Phibbs stated that field investigators were going to be wearing them by December, and they were only for staff who had enforcement/investigative duty.

Christopher Schroder, Director Division of Gaming welcomed Commissioner Workman and stated the Commission had a full five members for the first time in over a year. He also stated that Agent in Charge, Brad Nelson, was retiring. He explained that the Division was sad to see AIC Nelson leave, but was excited for his new chapter. AIC Nelson had been with the Division for 20 years, starting in 2004 after a 23-year career in law enforcement with the Northglenn Police Department.

Kirsten Gregg, Chief of Investigations, thanked AIC Nelson for his over 40 years of public service. She stated that the Division was very lucky to have him, and she was grateful to know him for over 30 years and valued his friendship, mentorship, and guidance.

Brad Nelson stated that working for the Division of Gaming allowed him to follow his dream of moving to a rural property and leaving the Denver metro area. He stated that the Division provided the opportunity to work with likeable and respectable staff. He explained that he took great interest in table games, serving on the committee for years, eventually becoming the Table Games Chair. He stated that he wanted to retire in 2021 but was offered the chance to become the Agent-in-Charge of the Cripple Creek Office and stayed with the encouragement of Chief Gregg. AIC Nelson stated that Dane Albin would be the new Agent in Charge of the Cripple Creek office. He expressed his gratitude to the Division and said it was wonderful to work with the industry members and casino staff in Cripple Creek.

Vice-Chair Tipton thanked Brad Nelson for his service, on behalf of the Commission, and wished him the best.

IX. Opportunity for the Industry Members to Address the Commission

The Chair extended an opportunity for any members of the gaming industry to address the Commission regarding any current issues or events. No members of the gaming industry came forward.

X. Adjournment

Prior to adjournment, Bradford Jones, Senior Assistant Attorney General, stated that he and Torrey Samson, Senior Assistant Attorney General, would be conducting annual training for the Colorado Limited Gaming Control Commission at the November 21, 2024, meeting.

The Commission voted unanimously to adjourn the October 17, 2024, meeting of the Colorado Limited Gaming Control Commission at approximately 11:00 a.m. MDT.

Breanne Nolan, Secretary to the Colorado Limited Gaming Control Commission

Colorado Limited Gaming Control Commission

Minutes of Public Session
November 21, 2024

PUBLIC SESSION

I. Call to Order

Chair Armstrong called the November 21, 2024, meeting of the Colorado Limited Gaming Control Commission to order at 9:15 a.m. MST in person at the Division of Gaming Office at 1707 Cole Blvd., Suite 300, Lakewood, CO 80401, and virtually via Zoom. Commissioners Hyland, and Workman were present in person and Commissioner Tipton was present via Zoom, and a quorum existed**.** Commissioner George was excused for good cause.

Officials & Administrators in Attendance
Kevin Armstrong, Commissioner, Chair
John Tipton, Commissioner Vice-Chair
Kevin Hyland, Commissioner
Phil Workman, Commissioner
Michael Phibbs, Senior Director, Specialized Business Group
Christopher Schroder, Director
Kirsten Gregg, Chief of Investigations via Zoom
Kenya Collins, Director of Administration via Zoom
Bradford Jones, Senior Assistant Attorney General
Torrey Samson, Senior Assistant Attorney General
Paul Hogan, Chief Auditor
J. Wolff, Agent in Charge, Central City/Black Hawk
Dane Albin, Agent in Charge, Cripple Creek
John Madruga, Agent in Charge, Background Unit
Andrew Fulton, Agent in Charge, Sports Betting
Dane Albin, Supervisory Investigator, Cripple Creek
Michael Payne, Table Games Chair
Breanne Nolan, Executive Assistant, Secretary to CLGCC

EXECUTIVE SESSION

The Commission voted unanimously to go into the Executive Session pursuant to sections 24-6-402(3)(a)(III), 44-30-521(1)(a), 44-30-526(1)(d), and 44-30-1507 of the Colorado Revised Statutes to review confidential background licensing reports that were scheduled for consideration in the Public Session.

The Executive Session was called to order at 9:21 a.m. MST.

PUBLIC SESSION

The Public Session was called back to order by Chair Armstrong at 9:39 a.m. MST.

II. Approval of Licensing Actions

The Commission voted unanimously to approve the renewal of the Manufacturer/Distributor Licenses for Ainsworth Game Technology Inc. and Ditronics Financial Services, LLC. The Manufacturer/Distributor Licenses will expire two years from their current dates of expiration.

The Commission voted unanimously to approve the renewal of the Operator License for Ainsworth Game Technology Inc. The Operator License will expire two years from its current date of expiration.

The Commission voted unanimously to approve the Reissuance of the Internet Sports Betting Operator License for Betsson U.S. Corp d/b/a/ Betsson d/b/a/ Betsafe. The Internet Sports Betting Operator License will expire two years from its current date of expiration.

The Commission voted unanimously to approve the Reissuance of the Vendor Major License for Betsson U.S. Corp d/b/a/ Betsson d/b/a/ Betsafe. The Vendor Major License will expire two years from its current date of expiration.

In accordance with Commission Policy 24-01, the Commission voted unanimously to approve the First Vendor Minor Licenses and Renewals of the Vendor Minor Licenses listed in the Consent Agenda in the November 2024 public packet.

III. Opportunity for the Public to Address the Commission

The Chair gave anyone from the public an opportunity to address the Commission on any item not appearing in the agenda. No members of the public came forward.

IV. Consideration of Limited Gaming Financial Statements for September 2024

The Commission voted unanimously to approve the Statement of Gaming Revenues, Gaming Taxes, and Expenditures (unaudited) for the three months ending on September 30, 2024, and to authorize its distribution.

V. Consideration of Division Sports Betting Financial Statement for September 2024

The Commission voted unanimously to approve the Statement of Sports Betting Revenues, Taxes, and Expenditures (unaudited) for the three months ending on September 30, 2024, and to authorize its distribution.

VI. Consideration of Limited Gaming Rule 21

The Commission voted unanimously to open the rulemaking hearing on Colorado Limited Gaming Rule 21.

Michael Payne, Table Games Chair, was sworn in and gave the presentation on Limited Gaming Rule 21. Bradford Jones, Senior Assistant Attorney General, stated that the newest version of the rules received by the Commission included both formatting changes and minor substantive changes suggested by Galaxy Games after the proposed rule was initially announced.

The Chair gave anyone from the public and opportunity to address the Commission on Colorado Limited Gaming Rule 21. No members of the public came forward to testify.

The Commission voted unanimously to close the public comment portion of the rulemaking hearing.

The public comment portion of the rulemaking hearing was reopened by the Commission so that a question could be asked.

Commissioner Hyland asked for clarification on the "final hold of 30%" that was included in the final version of Limited Gaming Rule 21.

Table Games Chair, Michael Payne, stated that this figure was what was kept and reported by the casinos at the end of the field trial.

Commissioner Tipton asked whether Galaxy Games had approached any other casinos to offer "Deuces Wild Xtreme." Table Games Chair Payne stated that the Monarch Casino Black Hawk was the only casino that was offered and completed the field trial between June 26, 2024, and September 11, 2024.

The Commission voted unanimously to close the public comment portion of the rulemaking hearing.

Following deliberations, the Commission voted unanimously to approve the amendments to Colorado Limited Gaming Rule 21, as presented.

The Commission voted unanimously to close the rulemaking hearing on Colorado Limited Gaming Rule 21.

VII. Consideration of Organizational Matters

Directors Updates

The minutes from the September 19, 2024, and October 17, 2024, and public sessions of the Colorado Limited Gaming Control Commission were approved as presented.

Michael Phibbs, Senior Director of the Specialized Business Group, stated that the Division'soffice move in Black Hawk was paused, pending ongoing negotiations between the building owner and Department of Revenue. He explained that the construction bid expired on December 31, 2024, and if negotiations had not progressed, the project would be put back out to bid. Senior Director Phibbs gave an update on the status of uniforms and body worn cameras for criminal investigators. He explained that Division of Gaming Investigators would be in uniforms by December 2024. He also stated that the Department of Revenue – Specialized Business Group – was notified it received the maximum grant funding amount for body worn cameras. He explained that contracts would be created to determine which Divisions would receive the cameras, and that the Division of Gaming Criminal Investigators were certainly on the list. He stated that the Division was hopeful body worn cameras would be used by March 2025.

Commissioner Hyland asked if the Department of Revenue and Division of Gaming would possible purchase the new Black Hawk office space. Senior Director Phibbs stated that this was currently not in discussion, but if it were, there would have to be value per square foot calculated and contracts would then be involved. Bradford Jones, Senior Assistant Attorney General, explained that any purchase of state owned buildings would involve the contracts unit of the Colorado Department of Law. Senior Director Phibbs stated that if the Division of Gaming was interested in purchasing the building, it would hold off until the lease was denied.

Commissioner Hyland asked for the construction bid expiration date. Senior Director Phibbs said the bid expired at midnight on December 31, 2024. Commissioner Hyland then asked for a move in timeline if the construction bid was denied. Senior Director Phibbs detailed that after the bid

was pushed back out for consideration, the proposals and build-out processes would be an additional 4-5 months, meaning a June or July move-in date.

Christopher Schroder, Director Division of Gaming stated that the Division had opened the Responsible Gaming Grant application period on November 1, 2024, and that applications were due by 5:00 p.m. MST. He explained that the grant applications would be reviewed by a committee from December to February and the grant applications would be presented to the Commission at its February 2025 meeting.

Commissioner Tipton asked if the Commission would review all applications that were submitted, in addition to project details and suggested offered services. Director Schroder confirmed that the Commission would receive all applications and full details, and that the Committee review would indicate whether the Division suggested funding.

MyColorado Mobile Driver's License (mDL) Presentation

Michael Phibbs, Senior Director, Specialized Business Group, and Michael Arrington, Chief Strategy Officer, Colorado Department of Revenue gave a presentation on the MyColorado Mobile Driver's License Project. Michael Arrington presented the slide deck which detailed the project timeline and explained the biometrics involved in the mDL. He stated that the mDL could be uploaded to Google, Apple, and Samsung wallets on mobile devices and that organizations could verify the mDL using partner tools like CREDENCE ID Tap2iD Mobile or IDEMIA. He explained that the mDL verification was safe, secure, and one hundred percent touchless, so users did not have to hand over their mobile device. Senior Director Phibbs stated that the gaming industry and operators could use mDL and its tools for age verification in casinos. He also explained that there was potential to use mDL for self-exclusion.

VIII. Opportunity for the Industry Members to Address the Commission

The Chair extended an opportunity for any members of the gaming industry to address the Commission regarding any current issues or events. No members of the gaming industry came forward.

IX. Annual Commissioner Training

Prior to beginning the annual training presentation, the Commission took a recess at 10:50 a.m. MST.

The Public Session was called back to order by Chair Armstrong at 11:00 a.m. MST.

Senior Assistant Attorneys General Torrey Samson and Bradford Jones presented the annual Commissioner training for fiscal year 2025 to Commissioners Armstrong, Tipton, Hyland, and Workman. Bradford Jones stated that the training was recorded and would be sent to Commissioner George for review, as she was excused from the November 21, 2024, meeting.

X. Adjournment

The Commission voted unanimously to adjourn the November 21, 2024, meeting of the Colorado Limited Gaming Control Commission at approximately 11:55 a.m. MST.

Breanne Nolan, Secretary to the Colorado Limited Gaming Control Commission

Colorado Limited Gaming Control Commission

Minutes of Public Session
December 19, 2024

PUBLIC SESSION

I. Call to Order

Vice-Chair Tipton called the December 19, 2024, meeting of the Colorado Limited Gaming Control Commission to order at 9:15 a.m. MST in person at the Division of Gaming Office at 1707 Cole Blvd., Suite 300, Lakewood, CO 80401, and virtually via Zoom. Commissioner Hyland was present in person, Commissioner Workman was present via Zoom, and a quorum existed**.** Commissioners Armstrong and George were excused for good cause.

Officials & Administrators in Attendance
John Tipton, Commissioner Vice-Chair
Kevin Hyland, Commissioner
Phil Workman, Commissioner via Zoom
Michael Phibbs, Senior Director, Specialized Business Group
Christopher Schroder, Director
Kirsten Gregg, Chief of Investigations
Allen Hiserodt, Chief of Sports Betting
Kenya Collins, Director of Administration via Zoom
Bradford Jones, Senior Assistant Attorney General
Torrey Samson, Senior Assistant Attorney General
Paul Hogan, Chief Auditor
J. Wolff, Agent in Charge, Central City/Black Hawk
Dane Albin, Agent in Charge, Cripple Creek
John Madruga, Agent in Charge, Background Unit
Andrew Fulton, Agent in Charge, Sports Betting
Michael Payne, Table Games Chair
Breanne Nolan, Executive Assistant, Secretary to CLGCC

EXECUTIVE SESSION

The Commission voted unanimously to go into the Executive Session pursuant to sections 24-6-402(3)(a)(III), 44-30-521(1)(a), 44-30-526(1)(d), and 44-30-1507 of the Colorado Revised Statutes to review confidential background licensing reports that were scheduled for consideration in the Public Session.

The Executive Session was called to order at 9:21 a.m. MST.

PUBLIC SESSION

The Public Session was called back to order by Vice-Chair Tipton at 9:46 a.m. MST.

II. Approval of Licensing Actions

The Commission voted unanimously to approve the Renewal of the Retail and Master Licenses for Kings, Queens, and Jacks, LLC d/b/a Saratoga Casino Black Hawk. The Retail and Master Licenses shall expire two years from their current dates of expiration.

The issuance of the above Master license does not concurrently grant approval to entities or individuals with whom this licensee has entered into, or considered entering into contracts for sports betting operations or internet sports betting operations; nor does it preclude any entities or individuals from being called forward by the Division to conduct a comprehensive background investigation regarding their suitability to operate in Colorado.

The Commission voted unanimously to approve the issuance of the First Vendor Major License for Flexout Media Group FZCO d/b/a Flexout Media Group Inc. The Vendor Major License will expire two years from its current date of expiration.

The Commission voted unanimously to approve the Reissuance of the Internet Sports Betting Operator License for VHL Colorado, LLC d/b/a SI Sportsbook. The Internet Sports Betting Operator License will expire two years from its current date of expiration.

In accordance with Commission Policy 24-01, the Commission voted unanimously to approve the First Vendor Minor Licenses listed in the Consent Agenda in the December 2024 public packet. The Vendor Minor Licenses will expire two years from their dates of issuance.

III. Opportunity for the Public to Address the Commission

The Chair gave anyone from the public an opportunity to address the Commission on any item not appearing in the agenda. No members of the public came forward.

IV. Consideration of Limited Gaming Financial Statements for October 2024

The Commission voted unanimously to approve the Statement of Gaming Revenues, Gaming Taxes, and Expenditures (unaudited) for the four months ending on October 31, 2024, and to authorize its distribution.

V. Consideration of Division Sports Betting Financial Statement for October 2024

The Commission voted unanimously to approve the Statement of Sports Betting Revenues, Taxes, and Expenditures (unaudited) for the four months ending on October 31, 2024, and to authorize its distribution.

VI. Consideration of Organizational Matters

Approval of Minutes

The minutes from the November 21, 2024, public session of the Colorado Limited Gaming Control Commission was approved as presented.

Directors Updates

Michael Phibbs, Senior Director of the Specialized Business Group, stated that the building lease for the Division's new office in Black Hawk was still being negotiated. He explained that the Executive Director of the Department of Revenue and Deputy Attorney General were working with the Division of Gaming to reach a resolution with the building owner. He also stated that

the Cripple Creek Division office was undergoing a refresh and had received new carpet, paint, and furniture. Senior Director Phibbs gave an update on the status of uniforms for Division of Gaming Investigators. He explained that the uniforms were still receiving sewn on patches and would be issued the first week of January. He stated that after the Mobile Driver's License (mDL) presented in November, the Monarch Casino had expressed interest in the mDL program. He detailed that the Department of Revenue had ordered mDL readers for demonstrations for the Division of Gaming and Liquor Enforcement Division.

Vice-Chair Tipton asked if the Commission could receive a demonstration with the mDL readers and Senior Director Phibbs confirmed that once the scanners were received, a demonstration would be given.

Christopher Schroder, Director Division of Gaming stated that the Responsible Gaming Grant Application submission period had closed and that the Division would present the applications to the Commission at the February 20, 2024, meeting. He also wished the Commission, stakeholders, staff, and Attorneys General a happy holidays and new year.

VII. Opportunity for the Industry Members to Address the Commission

The Chair extended an opportunity for any members of the gaming industry to address the Commission regarding any current issues or events. No members of the gaming industry came forward.

VIII. Adjournment

The Commission voted unanimously to adjourn the December 19, 2024, meeting of the Colorado Limited Gaming Control Commission at approximately 9:56 a.m. MST.

Breanne Nolan, Secretary to the Colorado Limited Gaming Control Commission

Exhibit 13

Notice of Intent Regarding License for Sports Wagering

The Massachusetts Gaming Commission ("MGC") requests that entities intending to seek a license for sports wagering pursuant to G.L. c. 23N complete this notice of intent and return it by August 31, 2022. Notices may be e-mailed to mgcclerk@massgaming.gov.

Please note that returned notices, and the information contained therein, will be subject to the Massachusetts Public Records Law and may be published or released by the MGC.

This form is being requested for informational purposes only and to aid the MGC in understanding potential interest in licenses for sports wagering. This notice of intent is not to be construed as an application or request for a temporary license and does not bind the MGC in any way.

Any questions regarding the notice of intent may be e-mailed to mgcclerk@massgaming.gov.

1. Legal Name of entity: Betfair Interactive US, LLC

2. Please identify type of entity:

   ☐ Holds a gaming license as defined in section 2 of c. 23K

   ☐ Licensed by the MGC in accordance with c. 128A to conduct a live horse racing meeting

   ☐ Running horse racing licensee that conducted simulcast wagering as of 12/31/20

   ☐ Greyhound meeting licensee that conducted simulcast wagering as of 12/31/20

   ■ Offers an interactive sports wagering platform through a mobile application or other digital platform

   ☐ None of the above

3. Name of contact person: Cory Fox

4. Phone number of contact: REDACTED

5. E-mail address of contact: cory.fox@fanduel.com

6. Name(s) of entity's mobile application(s) or other digital platform(s): FanDuel Sportsbook

7. Please list all jurisdictions in which the entity currently is or previously was licensed or authorized to conduct sports wagering, including but not limited to in physical sports books and

via mobile applications or other digital platforms. Please note if any licenses or authorizations are not currently valid.

Please see Exhibit A

8. Please list all jurisdictions in which the entity has applied for a license or authorization to conduct sports wagering, including but not limited to in physical sports books and via mobile applications or other digital platforms, and said application was rejected or withdrawn.

N/A

9. Please offer a brief description of the entity's business, including the type of business it will likely seek to conduct in the Commonwealth of Massachusetts.

FanDuel Group Inc. operates daily fantasy sports, online casino, online sports wagering, retail sports wagering as well as advance deposit wagering in certain jurisdictions. FanDuel will seek to offer online sports wagering in the Commonwealth of Massachusetts.

Please attach separate pages as needed to answer the questions above.

Notice of Intent Regarding License for Sports Wagering

7. Please list all jurisdictions in which the entity currently is or previously was licensed or authorized to conduct sports wagering, including but not limited to in physical sports books and via mobile applications or other digital platforms. Please note if any licenses or authorizations are not currently valid.

- Arizona
- Colorado
- Connecticut
- District of Columbia
- Illinois
- Indiana
- Iowa
- Louisiana
- Maryland
- Michigan
- Mississippi
- New Jersey
- New York
- Ontario
- Pennsylvania
- Tennessee
- Virginia
- Washington
- West Virginia
- Wyoming

Exhibit 14

ORDER 2020-60
IN RE SETTLEMENT AGREEMENT

BETFAIR INTERACTIVE US, LLC d/b/a FANDUEL SPORTSBOOK
20-FD-01

After having reviewed the attached Settlement Agreement, the Indiana Gaming Commission hereby:

APPROVED
APPROVES OR DISAPPROVES

the proposed terms of the Settlement Agreement.

IT IS SO ORDERED THIS THE 10th DAY OF JULY, 2020.

THE INDIANA GAMING COMMISSION:

Michael B. McMains, Chair

ATTEST:

Joseph Svetanoff, Secretary

STATE OF INDIANA
INDIANA GAMING COMMISSION

IN RE THE MATTER OF:	**)**	
	)	**SETTLEMENT**
BETFAIR INTERACTIVE US, LLC	**)**	**20-FD-01**
d/b/a FANDUEL SPORTSBOOK	**)**	

SETTLEMENT AGREEMENT

The Indiana Gaming Commission ("Commission") by and through its Executive Director Sara Gonso Tait and Betfair Interactive US, LLC d/b/a FanDuel Sportsbook ("FanDuel"), (collectively, the "Parties") desire to enter into this settlement agreement ("Agreement") prior to the initiation of a disciplinary proceeding pursuant to 68 IAC 13-1-18(a). The Parties stipulate and agree that the following facts are true:

FINDINGS OF FACT

COUNT I

1. IC 4-38-2-7 defines "E-sports" as a single player or multiplayer video game played competitively, typically by professional gamers.

2. On November 9, 2019, FanDuel's Director of Legal and Regulatory Affairs notified the Commission that, as a result of e-sports being approved in New Jersey, FanDuel's Risk and Trading team set up three (3) markets for their New Jersey system. Due to a filtering error on the IGT platform, the three (3) markets were also offered on the Indiana platform. These offerings were for League of Legends, World Championship Finals, and were available for approximately six (6) hours. FanDuel confirmed no wagers were placed during this time.

3. IC 4-38-5-4(a) and (b) provides that a certificate holder or vendor may accept wagers on professional and collegiate sporting events approved for sports wagering by the commission, and other events as approved by the commission. A certificate holder or vendor may use data selected in a manner approved by the commission to determine whether a wager is a winning wager.
(b) A certificate holder or vendor may not accept wagers on e-sports regardless of whether the e-sports event involves one (1) or multiple players.

4. Chapter 7, Section 1(a) and (b) of the Emergency Rules for Sports Wagering provides that before accepting wagers on any event category from patrons, a sports wagering operator must receive event category approval from the executive director or the executive director's designee. The sports wagering operator shall provide notice to the executive director or the executive director's designee and such notice shall include the name of the sport's governing body and a description of its policies and procedures regarding event integrity. The commission reserves the right to prohibit the acceptance of

any wagers, and may order the cancellation of wagers and require refunds on any event for which wagering would be contrary to the public policies of the state.
(b) The commission will post approved event categories to its website.

5. On July 23, 2019, the Commission issued a directive on approved events for sports wagering which indicated that collegiate events shall be limited to NCAA Division I sports.

6. On November 27, 2019, FanDuel's Director of Risk and Trading notified the Commission that a Division I vs Division II men's college basketball game had been offered. The game offered was Kansas (Division I) vs Chaminade (Division II).

COUNT II

7. IC 4-38-3-1 provides, in relevant part, that the commission shall adopt rules under IC 4-22-2, including emergency rules in the manner provided under IC 4-22-2-37.1, to implement this article. Rules adopted under this section must include the following: (8) Rules establishing geofence standards concerning where a wager may and may not be placed, including: (A) only placing wagers within the boundaries of Indiana; and (B) prohibiting wagers at the location of particular sporting events.

8. Chapter 11, Section 1(a) of the Emergency Rules for Sports Wagering provides that in order to prevent unauthorized use of the Internet or a mobile device to place a sports wager when a patron is not within the state of Indiana, the sports wagering operator shall utilize a geofence system to reasonably detect the physical location of a patron attempting to access the online sports wagering system and place a wager; and to monitor and block unauthorized attempts to access the online sports wagering system in order to place a wager when a patron is not within the permitted boundary.

9. FanDuel's approved internal control procedures describe its procedures for geolocation checks.

10. On December 5, 2019, FanDuel's Director of Legal and Regulatory Affairs notified the Commission that an issue arose after an update was performed to the sports book that sent Indiana bettors to New Jersey, thus affecting FanDuel's geolocation services.

11. On December 6, 2019, FanDuel submitted a report to the Commission which indicated that Gaming Account Network ("GAN"), the company that provides FanDuel with account, wallet, reporting and back office services, performed an update on FanDuel's sportsbook. After this update, there were indications that incoming wagers were being declined. Per FanDuel's report, a GAN Tool used to verify GeoComply's geolocation check was unable to access information correctly due to a memory management issue. Due to the memory problem, users were unable to place wagers and the GAN Tool was disabled. As a result of disabling the GAN Tool, players were geolocated in one state but able to navigate to another state and place a sports wager in that jurisdiction. One (1) wager was placed in Indiana by a user geolocated in Pennsylvania and was ultimately

voided. The release note was approved by the Commission, however, the release note did not provide any indication as to any geolocation updates, nor did it indicate that critical components as it applies to geolocation would be touched.

TERMS AND CONDITIONS

Commission staff alleges that the acts or omissions of FanDuel by and through its agents as described herein constitute a breach of IC 4-38, 68 IAC, the Emergency Rules for Sports Wagering, and/or FanDuel's approved internal control procedures. The Commission and FanDuel hereby agree to a monetary settlement of the alleged violations described herein in lieu of the Commission pursuing formal disciplinary action against FanDuel.

FanDuel shall pay to the Commission a total of $9,000 ($6,500 for Count I and $2,500 for Count II) and ensure that all wagers placed on all unapproved events are voided and the original wager is returned to the player in consideration for the Commission foregoing disciplinary action based on the facts specifically described in the Findings of Fact contained in this Agreement. This Agreement extends only to those violations and findings of fact specifically alleged in the findings above. If the Commission subsequently discovers facts that give rise to additional or separate violations, the Commission may pursue disciplinary action for such violations even if the subsequent violations are similar or related to an incident described in the findings above.

Upon execution and approval of this Agreement, Commission staff shall submit this Agreement to the Commission for review and final action. Upon approval of the Agreement by the Commission, FanDuel agrees to: 1) promptly remit payment in the amount of $9,000; 2) ensure that all wagers placed on all unapproved events are voided and the original wager is returned to the player; and 3) waive all rights to further administrative or judicial review.

This Agreement constitutes the entire agreement between the Parties. No prior or subsequent understandings, agreements, or representations, oral or written, not specified or referenced within this document will be valid provisions of this Agreement. This Agreement may not be modified, supplemented, or amended, in any manner, except by written agreement signed by all Parties.

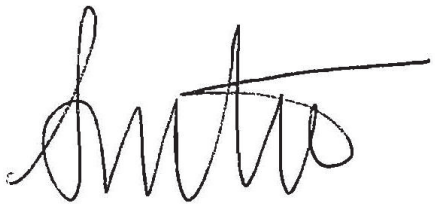
This Agreement may be executed in multiple counterparts, each of which shall be deemed an original agreement and both of which shall constitute one and the same agreement. The counterparts of this Agreement may be executed and delivered by electronic mail, facsimile, or other electronic signature by either of the parties and the receiving party may rely on the receipt of such document so executed and delivered electronically as if the original had been received.

This Agreement shall be binding upon the Commission and FanDuel.

IN WITNESS WHEREOF, the Parties have signed this Agreement on the date and year as set forth below.

Sara Gonso Tait, Executive Director Indiana Gaming Commission	Alex Smith, Director of Legal and Regulatory Affairs Betfair Interactive US, LLC
Date	May 4, 2020 Date

IN WITNESS WHEREOF, the Parties have signed this Agreement on the date and year as set forth below.



Sara Gonso Tait, Executive Director
Indiana Gaming Commission

6/24/20

Date

Alex Smith, Director of Legal and Regulatory Affairs
Betfair Interactive US, LLC

Date